THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the foundation of all trade and industry.—LIEBIG.

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For the Farmers' Cabinet.

Deep Ploughing.

"TAKE, for instance, the light, shallow, sandy soils in many parts of Maryland, and so far as my experience and observation extend, we would not only do no good, but positive injury, by deep ploughing."—"BEGINNER," *in the Cabinet for Sept.*, 1843.

MR. EDITOR,—A correspondent, who uses the signature, "Beginner," in the Cabinet of September, page 65, makes exception to the general principles of deep ploughing, in the form quoted above; and I have taken that sentence from his letter to serve as a text for some further remarks upon that most interesting subject. I admit, that the opinion expressed by "Beginner," as to the propriety of deep ploughing in light, shallow, sandy soils, is in accordance with that of nearly every farmer who is acquainted with such soils. Indeed, I am not sure that there is a single *practical* exception. And yet,—excuse me for saying so,—it is none the less an error, and an error, too, the more grave, because of its universal prevalence, and of the extensive injury it induces. If any soil whatever, is to be benefited by deep ploughing, and even subsoil ploughing, it is that very same *light, shallow, sandy soil.* Soils of an opposite character, especially deep soils, may better do without deep ploughing than shallow soils; because it is one of the main purposes of deep ploughing to convert shallow soils into deep ones. It must be borne in mind, that when we are advocating deep ploughing, we have the improvement of the soil in view, as an object of even greater value than the immediate crop we are preparing for. If we were preparing the soil for a single crop, and with no other view,—as is too much the case with most farmers, and especially with tenants from year to year, or those whose terms are expiring,—then we should plough a light, shallow, sandy soil, *cautiously;* but even then, not as cautiously as "Beginner" seems to imply that he would—because, all will admit that, even in such soils, a little clay, and a little loosening of the subsoil, would do no harm, and might do some good. But we are not ploughing for a single crop—we are ploughing, as it were, for futurity. Although the immediate crop is the one that carries us to the field, and the one that we expect to pay us, at least in good part, for the labour, yet that is not the one from which we expect our full remuneration, the great sum of our income—that is expected from the improvement we are making in

the soil, from increased crops in future years. I pity, most heartily, the certain ultimate condition of the farmer who ploughs and cultivates his soil with an exclusive view to the immediate crop. Deep ploughing, liming, and admixture of soils, have quite a different object in view—the improvement of the soil for future and more permanent benefits, viz.: the enhancement of its value and of the interest to be derived from it hereafter. Is there any other profession than that of the farmer, in which great pains are not taken to prepare the machinery, buildings, or materials out of which money is expected to be made? Why then should not the farmer, before he commences trying to make money out of his land, prepare that land and render it suitable to the object in view? If it be a "light, shallow, sandy soil," the first thing to be done, is to render it sufficiently stiff and deep. This can only be done by the admixture of clay and lime, and by deep ploughing. Where there is a clay subsoil, deep ploughing, alone renders the light, sandy, shallow soil, both stiff and deep. Indeed, I cannot conceive of a soil so naturally sterile, that it cannot be made productive by this means. The reader must keep in mind, that I do not suppose the first, or even the second season of deep ploughing, will be productive of a good crop—a very scanty crop will probably result from the first, second, and perhaps even the third deep ploughing; but, sooner or later, a deep substantial soil will inevitably be the result of deep ploughing,—accompanied, of course, by other proper management,—whatever the soil may originally have been. Why have we any but light, shallow soils? Is it not because those that are deep and productive, have been made so by deposits upon their surfaces, by the accumulation of nutritious matter from other than their own internal natural resources? And if the soil we happen to have in possession, shall not have made this accumulation of productive qualities, we must supply the deficiency by art.

The great amount of labour involved in carrying out the principle I advocate, is no argument against the principle itself. I admit that several years of hard labour would be required in making a deep and productive soil of many of the light, shallow soils of Maryland; but I contend, that when made, they will be worth more than enough to pay for all this labour.

In my former paper, which you have done me the honour to re-publish, with the note of "Beginner," I expressed the opinion that this deep ploughing was the main security for good crops at all times. Of course I intended to be understood as referring to cases where deep ploughing had been practised sufficiently long to make a deep soil. I did not mean to say, that one who had heretofore practised shallow ploughing, would certainly make a good crop the first season he tried deep ploughing. He will, of course, turn up much inert earth, which will so dilute the nutritive matter of the soil, as probably to render his first, and possibly his second crop, less productive than his shallow ploughing had previously done; but if he perseveres he will ultimately succeed to his full satisfaction. I have no doubt, that even the first crop, after deep ploughing, will be benefited in one respect, and that not a trifling one, to wit: in a case of drought. I have seen this effect so marked, that it was the main cause of my attention being called to the subject. Where deep ploughing has been well performed, the soil well limed, I do not believe any drought to which our climate is liable, can do much harm to the crop.

One of the main obstacles to the adoption of the system of deep ploughing, liming, &c., in our husbandry, is the universal passion for quick returns. It is a hard matter to induce any one to invest either labour or capital, in any thing that is not expected to return a profit in a short time—a few months at furthest. As no one expects much benefit from lime or deep ploughing under two or three years, the investment of money in such an object is not made. This is really a short-sighted policy. If we live, we shall want good crops and the proceeds thereof, fully as much, and possibly more five years hence, than now; and if we do not live to enjoy the benefit of the investment, our property will be enhanced in value to our successors.

Yours, Gideon B. Smith.

Baltimore, Sept. 20th, 1843.

Worms in the blood of a Dog.

Physiologists and anatomists have long since detected the presence of certain entozoa in the nutritive fluid of cold-blooded animals, as, for instance, frogs and fish. In the mammiferæ, worms have sometimes been found in the blood; but these worms had probably only come there after having perforated the organs in which they had developed themselves. It is of very great importance to physiology, pathology, and natural history, to demonstrate, not merely the existence of entozoary worms in the blood, but moreover to prove their constant circulation in that fluid, in animals which come near to man. Now, since science is not as yet in possession of any example demonstrating conclusively the circulation of worms in the blood

of mammiferous animals, we are most anxious to communicate to the Academy the discovery which we have made of entozoa circulating in the blood of a dog of a vigorous constitution, and in a state of apparent good health.

These worms are from three to five milliémes of a millimetre in diameter, and about twenty-five in length. The body is transparent and colourless. The anterior extremity is obtuse, and the posterior or caudal extremity ends in a very fine thread. At the fore part, a small, short furrow, five milliemes of a millimetre in length is observed, which may be considered as the mouth.

By all its characters, this species of hæmatozoa must rank in the genus *Filaria.*

The motion of these animals is very lively. Their life continues even ten days after the blood has been drawn from the vessels and deposited in a vessel placed in a temperature of 59° Fahr.

By examining a drop of blood under the lens of the microscope, we see these hæmatozoa swim with an undulatory movement between the globules of blood; they curl, uncurl, and twist about with great vivacity.

In order to be certain whether these worms existed in the whole circulatory current, we examined the blood of the coccygeal arteries, those of the external jugular veins, of the capillary, of the conjunctiva, and of the mucous membrane of the mouth, of the skin, and of the muscles, and we were always able to detect entozoa.

For the last twenty days we have daily opened the capillaries of the different parts of the skin, and of the mucous membrane of the mouth, and always find these animals present.

The urine and excremental matters do not contain them.

The diameter of the globules of the blood of the dog, is from seven to eight milliémes of a millimetre; that of the *Filaria* is from three to five. There is, therefore not the least doubt but that this worm can circulate wherever the blood has to pass. We reckon, according to several investigations made in order to ascertain the quantity of blood existing in the vessels of dogs of moderate size, that the dog in question has $1^{kil}.500$ of blood in circulation. Now a drop of this blood weighs $0^{kil}.067$, and in this drop we are able to detect from four to five *Filaria.* This dog would therefore contain more than 100,000 of these worms in the whole of its blood.

The prodigious number of the animals is the more astonishing, as the dog seems to be in good health. We should however remark, that the entozoa of the digestive canal of dogs, the *Tænia*, even in very great numbers, very seldom disorder the vital functions.

During a year, we have examined the blood of from seventy to eighty dogs, without meeting with the *Filaria*, and dating from its discovery, we have sought for it, but in vain, in the blood of fifteen dogs.—*Annales de Chimie et de Physique* for March.

Remedy for Indigestion.—A friend has handed to us for publication, the annexed remedy for indigestion, a complaint which is so generally prevalent in this country. It was communicated to him by a gentleman in Great Britain, who says in his letter on the subject:

"Having suffered much from indigestion, I send you the remedy to relieve you. It arises by rejecting too large a portion of the phosphates of lime and magnesia contained in the bran in making our bread: being quite sure that our all-wise Creator, in giving us wheat for our food to support our frames, placed in it every necessary constituent for the health of them. When, therefore, you derive benefit from it, please to make it known to our brethren in America."

Boil half a pint of white wheat three hours in a quart of water, or a little more, if necessary. Drink half a pint of the liquid, twice or thrice in a week and the effect will soon be perceived.

To make wholesome bread.—Six ounces of bran boiled one hour and a half in five pints of water; strain the liquid from the bran, and dilute it with water sufficient to make the bread. Two ounces of salt; five pounds of good flour; two table-spoonfulls of yeast. In baking a larger quantity, each article must be proportionably increased.—*U. States Gazette.*

Can't and Won't.—*Won't* is a great word for little folks to speak. It don't sound well from tiny lips. But great as it is, the same tiny lips which squeeze it out, are obliged to *eat it up again.* And it is a hard word to eat. It is a *jaw-breaker*, and it don't taste good, neither. Indeed a bitter pill it is. You had better not speak it. It's a saucy word, which will always bring you into trouble.

But *can't* is the *lazy* boy's word. If you indulge yourself in saying *can't*, we fear you will never do anything. You had better cross it out of your dictionary. *Master Can't* will never come to any thing.

For the Farmers' Cabinet.

Seedling Fruit Trees.

Mr. Editor,—I was much struck with the plausibility and apparent force, of some observations of a writer in the August number of the Cabinet, under the appropriate signature of "Poma," on the subject of *Apples*—particularly the apples of Ohio. I have not the article by me, but the gist of his reasoning was, that the youthful appearance of the fruit trees, especially the apple trees of Ohio, and the fairness and soundness of the fruit, which have attracted the notice even of passing strangers, was probably to be ascribed to the trees themselves being *seedlings*, or recently derived from seedling trees. He argued the probability, that "settlers" in Ohio, from the Eastern States, had taken the *seeds* of apples as a matter of convenience, in lieu of scions or grafted stocks from old trees; and that therefore, the present orchards of Ohio, are in fact, youthful trees. This conclusion would appear to be warranted by the theory and the practice now prevalent in Europe—especially in Belgium—where they are creating, as it were, new and ameliorated varieties of fruits, by planting the seeds for several successive generations, until a fine variety is obtained, worthy to be preserved and propagated. They are not at all particular about the excellence of the fruit from which they take the first seed for planting; neither does the fruit from the first planting show much, if any sign, of amelioration; but the second generation comes out with higher promise, and a superior variety is usually established in the third generation, with the *peach*, according to Van Mons, and in the sixth, with the *apple*.

Knowing how observant he is of things useful in their nature, and connected with the substantial interests of society, I called the attention of Mr. Whittlesey, himself a practical farmer of Ohio, to "Poma's" remarks, and received from him, with his characteristic promptness and kindness, the enclosed letter, which you are at liberty to publish, if you see proper. It is offered primarily, for its intrinsic value, in reference to this most valuable of all the fruits in Ohio; and secondly, as some evidence of my own sensibility to the kindness evinced by yourself, and the publishers of many other agricultural, and other periodicals and papers, in sending them gratuitously to one who has no means of making any return, except, as in this case, by an occasional communication.

Permit me, while I have pen in hand, to congratulate you on the progress of improvements in agriculture and horticulture, which has marked the time in which we have lived. "Intelligent writers," says Kenrick, in his excellent 'New American Orchardist,' "those on whom we may rely, have assured us that the *new* and numerous class of fruits which have arisen during the last forty years, is far more precious and inestimable in point of quality, *than all previously known*."

When I established the "Old American Farmer," chiefly as a vehicle for the outpouring of my own crude notions of what *might* be done to improve the processes and implements of American agriculture, to meliorate our domestic animals and fruits and vegetables, and to vindicate and elevate the cause of agriculture, as a great and neglected national interest—I had five hundred impressions of the first number printed and laid on my table, without knowing whether I should ever have either correspondent or patron. Look now at the number of attentive and earnest readers of agricultural journals in the United States! Here is an extract from the first number of the "American Farmer," dated *April 2nd*, 1819,—twenty-four years ago. It would have been issued on the *1st of April*, but that you know is all-fools'-day, and it was doubtful whether the attempt to establish an agricultural periodical, might not turn out as bootless as "hunting the Gowk" in Scotland, on April day. This is done by sending silly people upon fools' errands, from place to place, by means of a letter, in which is written,

> "On the first day of Aprile,
> Hunt the Gowk another mile."

It amuses me now to look back to the first number of that journal, at the likeness, for it was a true portrait, of the *famous ox, Columbus!* What, at the cattle show at Rochester, would have been thought of an animal *of such a form?* Amusing too, is the caution with which the editor felt his way. "The editor has taken the liberty to forward the first number of the 'American Farmer,' to *some gentlemen* whose names occurred to him at the moment, and who, he thought, would be likely to patronize a work of this kind. He begs, that if they approve of the plan of it, they will make it known, and by any convenient means, assist in extending its circulation.

"The editor will be gratified, if by devoting his leisure hours to a publication of this sort, he can be instrumental in preventing his native State,—Maryland—from being outstripped by all her neighbours, in the honourable contest for *the promotion of agriculture, manufactures, internal improvement, and domestic economy.*"

But, sir, great as has been the progress of improvement in the science of vegetable physiology, and all others—bright as are the lights that shine upon our path, let us not in the vanity of self-conceit, suppose that these improvements have been achieved by any *wonderful faculties or extraordinary energies of our own*:—no age can claim super-excellence; each is indebted to the one preceding, as much as the succeeding one to it. Knowledge has a tendency to increase in a compound ratio. The great developments of one period, are the fruits of seed planted in the one preceding. Instead then of folding our arms and priding ourselves on our own achievements, let us endeavour to prove ourselves faithful stewards in the management of the talents committed to us. Where much is given, much will be expected. Let each in his sphere, however humble it may be, render to the great Father of all, *acceptable homage*, by endeavouring to augment the comforts and happiness of his fellow-creatures: such has been, in a measure, the practice—such *is* the religion of your well-wisher and friend, J. S. Skinner.

Washington, October 1st, 1843.

Auditor's office, Post-office Department,
September 9th, 1843.

My Dear Sir,—Having read your letter of this date, and the article signed "Poma," in the "American Farmer," copied from the "Farmer's Cabinet," I shall very briefly attempt to answer your inquiries.

The apples in the north part of Ohio,—in what is known by "the Western Reserve," and in the country bordering on the Ohio river, as far as Marietta and its vicinity, where I am best acquainted,—when proper care has been taken in selecting and cultivating them, are superior in size, fairness, and flavour. I have visited no part of the country, where they so generally abound. It is as uncommon to see a house without an orchard, as without a garden.

When trees are taken from nurseries not grafted or budded, and are left to contend with weeds and grass, they become scrubby; are covered with rough bark and moss, and bear small, ill-flavoured fruit. Seedlings, when reared and pruned by a horticulturist, instructed and skilled by the veteran editor of the old "American Farmer," are in very many instances, delicious.

Several years elapsed after my residence in the Western country, before I saw a defective or wormy apple. South of Lake Erie, and distant from it, from two to twelve miles, is a ridge composed of loam and sand. This, and the land between it and the Lake, is the best region for fruit I have seen, whether abundance or perfection is considered. Four years this fall, there was more fruit between Elyria, in Lorain county, and the Pennsylvania line, a distance of about 100 miles, than was, at the same time, in some of the old thirteen States—not the smallest.

The writer under the signature of "Poma," raises the question, whether the youthful appearance of the trees and the excellency of the apples in Ohio, may not be accounted for, "from their much more recent derivation from seedlings?"

He is correct in saying, that the early settlers, particularly those who went to the northern part of Ohio from the New England States, carried apple seeds of the most esteemed varieties, and there is no doubt, a variety of choice fruits might be selected in different sections of that country, from such seedlings, thus produced. The youthful appearance of the trees depends, first, on age and culture; secondly, on climate and soil. Trees of the same age, on the ridge mentioned, are generally more thrifty, smooth, and taller, than they are on the high lands south of it. Their roots strike deep into a good soil, from which nourishment is derived.

The French traders and the Indians had apples at Detroit, river Raisin, Peninsula of Sandusky bay, and other places. The trees were uncommonly thick, and some of the orchards appeared not to have been transplanted. Where the seeds were first obtained, is not within my knowledge. The fruit was generally fair and good, and most of it was a deep red.

Mr. Neesley settled early in Western Virginia, on the Ohio, nearly opposite to the mouth of Yellow creek, and propagated fruit extensively. When the land north-west of the Ohio was open for sale, he purchased a tract on the bank of the Ohio, above Yellow creek, where he sowed a large nursery, and engrafted and budded the choicest apples he could obtain. Many, if not all of his kinds, are mentioned in books on horticulture. General Elijah Wadsworth, emigrated from Litchfield, in Connecticut, to Canfield, in Trumbull county, Ohio, as early as 1800, and having cleared a field, he planted a large orchard from Mr. Neesley's nursery.

Last fall, I exhibited in this city, seven different kinds of this fruit from my own orchard, which were admired at a large table, for their beauty and taste.

Mr. Neesley's fruit was so celebrated, that Alfred Kelly—since distinguished for valuable services in the improvements of Ohio—early carried a large bundle of small trees on horseback, from the river to the

lake, a distance, as he travelled, of about one hundred miles.

Almon Ruggles settled in Huron county, on the shore of Lake Erie, in 1806, and obtained the choicest of Mr. Neesley's collection, and several varieties from the Eastern States. His apples were larger some years since, than any apples of the same kind, whose weight had been ascertained and published.

Paul Fearing, at Marietta, Thomas Worthington, at Chilicothe, N. Longworth, at Cincinnati, Abraham Tappan, at Unionville, and others, early in the settlement of those sections of the country, turned their attention to the culture of apples of the choicest kinds.

Varieties thus obtained, and from other sources, have been extensively propagated; and although seedlings are often delicious, the best are those plucked from grafts and buds.

Mr. Knight's theory, "that all plants of one species, however propagated from the same stock, partake, in some degree, of the same life &c." is worthy of serious consideration and experiment.

The result of my observations and comparisons, is, that the same kinds of apples west of the mountains, are larger, sounder, fairer, and better flavoured, than at the east: that young trees, in a virgin soil produce better fruit than old trees in a country long cultivated, and that the soil and climate in Ohio, are well adapted to the cultivation of apples. I am inclined to think, particular situations, are best for the full development of different kinds of this fruit. Chardon and Jefferson, are at least 600 feet above the Lake: and they produce the Rhode Island Greening in greater perfection than I have seen elsewhere.

Poma's plan of propagating fruit at the east from the west, by seedlings, should be put in practice. Several gentlemen would search for, and send grafts of the best seedlings if requested. Dr. Jared P. Kirtland, near Cleaveland, and N. Longworth, Esq, at Cincinnati, much skilled in Horticulture, would be most valuable correspondents, for extreme sections of the state; and their acquaintance in other parts, enables them to designate other gentlemen, who would cheerfully render any services to that object.

The north, east and south are indebted to the west for the mercer potatoe, and no doubt, they can be supplied from that quarter, with delicious, new varieties of the apple.

We will pay *this class* of our foreign debts as soon as *demanded*, without *repudiation*. The practice of planting trees in different parts of large fields, in this District, Virginia and Maryland, must be abandoned, to obtain sound and fair fruit. An orchard should be fenced by itself, and large cattle never be permitted to enter it. Sheep should be excluded in the winter and spring.

Swine improve an orchard, by turning up the ground,—by consuming the defective apples as they drop, before they are at maturity; thereby destroying the insects which brought them to the ground, preventing their annual increase, and finally exterminating them.

Messrs. Fields in the eastern part of New York, were celebrated, in that section of their state, and in Connecticut adjoining, for raising the Newtown Pippin, and other apples, in greater perfection, than other persons in their vicinity, and their "*long noses*" gave them both reputation and cash.

And now my dear Sir, that the rich and varied blessings, your long and useful labours merit in the various fields you have cultivated, so greatly promotive of the happiness of your fellow men, and the interests of your country, may be yours, until your sun shall finally set, will be the prayer of your devoted friend, "when over the mountains, and far away."

Elisha Whittlesey.

John S. Skinner, Esq.

Disinterestedness.—"In the last war in Germany, a captain of cavalry was ordered out on a foraging party. He put himself at the head of his troop, and marched to the quarter assigned him. It was a solitary valley, in which scarcely anything but woods could be seen. In the midst of it stood a little cottage. On perceiving it, he went up and knocked at the door. Out came an old Moravian brother, with a beard silvered with age. 'Father,' says the officer, 'show me a field where I may set my troopers a-foraging.' 'Presently,' replied the brother. The good man walked before, and conducted them out of the valley. After a quarter of an hour's march, they found a fine field of barley. 'There is the very thing we want,' says the captain. 'Have patience for a few minutes,' replies the guide; 'you shall be satisfied.' They went on, and, at the distance of about a quarter of a mile further, they arrived at another field of barley. The troop immediately dismounted, cut down the grain, trussed it up, and remounted. The officer, upon this, said to his conductor, 'Father, you have given yourself unnecessary trouble; the first field was much better than this.' 'Very true, sir,' replied the good old man, 'but it *was not mine*.'"

For the Farmers' Cabinet.

Improved Durham Cattle.

One who signs himself "A Constant Subscriber," in your August number, asks numerous questions about Durham or Short-horn cattle, concerning which he has rather confused and indefinite ideas; and apparently, he has taken but little pains to correct them, for the information he desires, has been printed an hundred times. But as he probably does not know where to look for it, I will endeavour to answer the questions he has proposed.

He has most certainly evinced his judgment in the choice of breeds which he has made; for milk and beef being the qualities he desires, he could not have found another race, which could at all compete with the *Durham Short-horns.* In milk alone, perhaps, the Yorkshire or the Ayrshire, might push them hard; but the body of the former is ill made and coarse, late in coming to maturity, putting the flesh upon the most unprofitable parts, and hard to fatten after a number of years milking. The carcass of the latter, though compact and well proportioned, is small, and better fitted to a cold and scanty region, than to the rich pastures of Pennsylvania. In beef, the Herefords claim to be their equals, but they lack that docility—one of the peculiar characteristics of the Short-horns, so much prized by the dairyman and the feeder. Add to this, the power which the Durhams have, of almost immediately conferring their good qualities upon the crosses between themselves and our native stock, and I think no animal can any where be found that will compare with them.

The breed of Short-horned cattle, was formerly confined to the counties of York and Durham; and though possessing, in a great degree, those milking qualities for which the present improved race are so remarkable, they had none of their propensity towards early maturity, and readiness to take on flesh when too old for the pail; on the contrary, they were large, course, ill made animals, taking a long time to prepare for the shambles, and putting the flesh which was finally got upon their shapeless bodies, into the most worthless parts. The first improvements were made upon the banks of the Tees, a small river running through the county of Durham, where these cattle particularly abounded; and from them, called the Teeswater breed, the present improved race is descended; although now never known by that name. It has never been certainly ascertained, what other breeds were resorted to by these early improvers, but it is evident the present race could not have been built up from the old breed alone, even by the most judicious selections. About the time of these first efforts at improvement, some cattle were imported from Holland, and extensively used, but they were large, coarse animals, and it was soon discovered, did more harm than good. A few more judicious breeders, were wise enough to steer clear of them, and resorted to other breeds which are not known; but it is probable the white wild breed was one, which accounts for the prevalence of that colour in the present race.

These cattle maintained their superiority for a number of years, until the appearance of Mr. Charles Colling upon the stage, who soon, by his remarkable talent for breeding, wrought an evident improvement in the race. Some however, deny this, and state that Mr. Colling himself said, that he never bred an animal equal to his first cow, purchased of the Duke of Northumberland; this is no doubt true; but by judicious crossings and selectings, he perpetuated those good qualities, which were only accidentally obtained in this first cow, the celebrated Dutchess, and his bull Hubback. Mr. Colling, however, did not keep entirely to the pure blood, but tried various crosses, among which, that with the Polled Galloways, was the most successful. The Galloways are a much smaller race of cattle than the Short-horns, with round, close bodies, low upon the ground, and extremely hardy; they were, therefore, well calculated to render more compact the too loosely made Short-horns, and lessen the length of their legs. Mr. Colling chose a beautiful little cow—took one cross from her, and then bred back to the Short-horns; thus obtaining those qualities he desired, without ruining his herd by too great an admixture of the Galloway. From this cross, termed at the time, by breeders of the pure blood, the "Alloy," is descended one of the most celebrated of the present Short-horn families.

All the praise, however, at the present day lavished upon the Short-horns, is not due to Mr. Colling; there were other breeders then and since, who have greatly improved them; and many celebrated animals now living, date from far other progenitors than Dutchess and Hubback.

The three first questions are now, I believe, fully answered; except that I would add that the Yorkshires, although a breed of Short-horns, are not to be confounded with the race of cattle, which at present go by that denomination.

In respect to the fourth question, I will only say, that one of the families of the *im-*

proved Short-horns should be chosen, as the *unimproved*, although good milkers, cannot compete with them in any way.

N.

Sept. 12th, 1843.

The Valley of the Mississippi.

The Mississippi valley is known by such crude and indefinite names as the West, the Western country, the Lake country, the South-west, the Far West. Its boundaries on the west, are the Rocky mountains, Mexico and Texas; on the south, the Gulf of Mexico; on the east, the Alleghany mountains; and on the north, the Lakes and British possessions. It contains nearly as many square miles as continental Europe, and if populated as densely as England, would sustain a population of five hundred millions of human beings—more than half of the present population of the earth. Stretching from the 29th to the 49th degree of latitude, it possesses great variety of climate. In richness of soil and extent of tillable land, it is not surpassed by any country of the same extent. Its surface is almost unbroken by a mountain, or a hill of sufficient size to impede cultivation. Geographically viewed, it is pre-eminently a commercial country, and is particularly eligible for foreign commerce. To see, reader, for yourself, what the Mississippi valley is, suppose you go on board of one of those steamboats lying at the wharf in New Orleans, and about to start for the upper Mississippi. Leaving the orange groves and sugar plantations of the South, in about ten days the boat will land you at the Falls of Saint Anthony, twenty-five hundred miles up the Mississippi river; if you think you are not far enough north, you can walk around the Falls, and, taking another boat, ascend eight hundred or a thousand miles further. On your way up, you will have passed through many climates, and seen the productions of each under cultivation, and over a vast mining region, abounding in coal, lead, iron, and copper ore, all found in veins of wonderful richness. As you return, should you wish to take a peep at the West, you will take a boat at St. Louis, bound up the Missouri.

After a couple of weeks or so of good hard running, she will land you at the Great Falls, in the country of the Blackfoot Indians, about thirty-nine hundred miles above St. Louis, and five thousand from New Orleans. Returning, you would of course wish to see some of the tributaries of the Missouri; for this purpose you would make a little excursion of eleven hundred miles up the Yellow Stone, of sixteen hundred up the Platte, and of twelve hundred up the Konzas, and so back to St. Louis, on the Mississippi river, twelve hundred miles from New Orleans. There you would take a boat for the beautiful Ohio, and run up that stream to Pittsburgh, one thousand miles from the mouth of the Ohio, and two thousand from New Orleans. You would see the flourishing towns of Louisville, Cincinnati, and Pittsburgh; the most luxuriant crops of grains and grasses; fine and numerous flocks and herds of every kind: you would smile to see the primitive contrivances wafted on the bosom of the Ohio, bearing the products of the Ohio valley to its distant market in New Orleans, and more than all, you would rejoice to see the healthy, happy, smiling faces of the people. Before you again embarked on the Mississippi, you would no doubt run three or four hundred miles up the Cumberland, six or seven hundred up the Tennessee river, to see what were the first cotton regions of the valley, and how highly cultivated and improved. Once more on the Mississippi, on your way downward, you would be prompted to shoot fifteen hundred or two thousand miles up the Arkansas river, just to see where all those hides and furs come from. You would, no doubt, run two or three hundred miles up the Yazoo, and two hundred or so up the Big Black, both in the State of Mississippi, to see the countries that send out those stupendous steamboat loads of cotton that you meet on your way up; and just before you reached New Orleans, you would be sorely tempted to pop a thousand or fifteen hundred miles up Red river, to see the splendid cotton plantations of Louisiana, and give a finish to your excursion.

When you got back to New Orleans, you would have a tolerably accurate idea of what the Mississippi valley is; and by putting the distances together, you will find that you travelled very comfortably by steamboat, sixteen thousand miles, and in going and returning, double that distance. Should curiosity lead you to investigate, you will find that in the Mississippi river and its tributaries, the Mississippi valley possesses a steamboat navigation of twenty-five to thirty thousand miles. Such is a brief but true geographical glance at the valley. To the mind of an Atlantic or European reader, it may appear more of a "fancy sketch," than a true description. Let them not suppose that truth is violated because our rivers are large; we did not make them, and are not responsible for that. We have, however, plenty of such little streams as the Hudson, the Delaware, the Potomac, the Santee, the Thames, the Severn, the Mersey, the Hum-

ber, but we do not dignify them with the name of rivers; we call them creeks or bayous. With us it takes a river to make a river.

In 1790, no State had been erected in this valley. Not including the population of the western section of New York, Pennsylvania and Virginia, its population was then only 108,868; not equal to that of Bedfordshire, in England. In 1800, it contained two States—population 385,647; nearly equal to that of Cheshire, in England. In 1810, it contained three States—population 1,099,160; nearly equal to the West Riding of Yorkshire. In 1820, it contained six States—population 2,217,464; nearly equal to that of Scotland. In 1830, it contained nine States—population 3,672,479; more than that of Scotland and Wales. In 1840, it contained eleven States—population, including that of the western sections of New York, Pennsylvania and Virginia, 8,434,749; being more than that of Scotland, Wales, both the Canadas, all the British West India islands, Australia, and the West Riding of Yorkshire.—*National Intelligencer.*

For the Farmers' Cabinet.

Centre-draught Plough.

Mr. Editor,—Prouty's Centre-draught plough is so greatly superior to any other, in every point of view which makes a plough valuable, *but one*, that it is desirable it should get into more general use; but the defect to which I refer, is fatal to it:—it is a *right-handed plough*. In this, among the best agricultural districts in the State of Pennsylvania, there is scarcely such a thing to be found as a right-handed plough; man, boy, and horse, are wholly unaccustomed to them; and with deference to the opinions of others, I think it desirable that they should keep so. In the use of the left-handed plough, the lead-horse walks in the furrow; hence, with horses at all accustomed to work, there is no driving to be done—the path of the leader is so distinctly marked, that he never deviates from it; but, with the right-handed plough, the lead-horse walks upon the sod or unploughed ground, affording him an opportunity to stray to the right or left, as his carelessness, the inequality of the ground, or any other cause may induce. Any ploughman, good or bad, and especially the latter, will always make better work with a left, than a right-handed plough. I am convinced that with the Centre-draught plough we can break up a clover sod with as much ease to two horses, as three can do it with the best plough of any other kind we have; and that hundreds of them could be sold in this county, if the defect which I speak of were remedied. And the same alteration should be made in the Subsoil plough.

Yours, &c.,

F. W.

Carlisle, Pa., Sept. 8th, 1843.

Moral duties of the Physician.

We find the following extract from Dr. Bartlett's Valedictory to the graduates of Transylvania University, in the June number of the Boston Medical and Surgical Journal. There is much beyond its poetry and seeming romance, to recommend it to our admiration. If we would follow the impulses of duty—the noblest principle of human action—there is no question but we may sometimes be led in paths of such imminent danger, as seem to point almost to self-sacrifice. An approving conscience may be all-sufficient to sustain us in these positions of trial: yet it is reasonable to suppose, our energies may be invigorated by the reflection, that there are those around us, whom the most worthy may venerate, and who are capable of appreciating the nature and the value of the sacrifice, we are laying upon the shrine of duty.—Ed.

The last motive of which I shall speak, and under whose promptings, to a greater or less extent, you will perform your professional labours, *is the sense of duty.* This is the loftiest and noblest principle of human conduct, and when enlightened and pure, it is the safest. I do not stand here as a sermonizer. Such is not my vocation. I meddle in no way with your religious belief. I have nothing, whatever, to do with your articles of faith, or your religious creeds. These rest between yourselves and your Maker. To his own master every man standeth or falleth. But this great truth, of the supremacy of the religious and moral nature, God has written as legibly in the very constitution of humanity, as he has in his own inspired and authenticated volume. True science and revelation mingle their accordant voices in the proclamation of this transcendent verity. They alike declare that human character attains its fullest development, and reaches its highest perfection, on one sole, inevitable condition—and that is, the ascendency of these powers. Unsullied integrity, truth, purity, honour that can take no stain, self-sacrifice, doing unto others as we would that they should do unto us, justice, charity, philanthropy, love—have not these ever constituted, do they not still constitute, the strength, the grace, the glory, the ornament of humanity? And in the practice of our own art, they are as essential to the largest success and the highest happiness, as in any of the walks of life. I rejoice that we belong to a profession, so

crowded as is our own, with high examples of this beautiful union of science and virtue. The annals of our art are all radiant with their starry names. Go where you will—through all the wide regions of civilization and of science; and in every nook and corner, in every quiet village, in every remote and rural district, will you find the fragrant memory of some such example, or some living illustration of its beauty.—In the village church of Dundalk, there is a marble monument, on which is written the name of George Gillichan—a man, as I have learned since these words were written, who was a classmate in Europe, and an esteemed personal friend of one of my present colleagues. In the beginning of that dreadful epidemic with which Ireland was overrun, twenty-five years ago, he was among the earliest to see and to comprehend the danger of the coming storm. He aroused his friends and neighbours to a sense of the peril which was approaching them; he urged them to make ready for its visitation; he aided them in the establishment of an efficient medical police, and in the institution of a public hospital. And when, amidst gloom, and misgiving and terror, it came upon them, where was the young physician? Day and night, at the bedside of the sick and the poor. He refused entirely the calls of the rich. He withdrew himself entirely from the service of those who were able to pay, and who could therefore easily command all the care and attention which they required, in order to devote himself exclusively to the destitute, the forsaken, the neglected—to those who were ready to perish because there were none to help. Gillichan was young—thirty years had not yet passed over his head—he was learned and accomplished;—life, with its golden honours yet unreached—with its choicest pleasures yet untasted, spread far and wide before him;—he hoped to escape the fever, although he had a strong and sad presentiment, that he should not survive it if it seized him—he knew, that in the close and confined dwellings of the poor, the contagious causes of the disease were concentrated and malignant—but, urged on by his sense of duty, and his love for his fellow-men—hour after hour—day after day—night after night, in the crowded hospital, in the unfurnished hut, by the wayside, in the dark, damp, cheerless hovel, with its beds of straw—wherever the mingled call of disease and poverty summoned him—wherever there was suffering to be relieved—wherever there was hunger to be appeased—wherever there was wretchedness to be comforted—*there*, with the succours of his art, with the charities of his liberal hand, with the solace of his friendly voice, like a ministering angel, was the young physician. At last, worn down by fatigue, and poisoned by the thick contagion in the midst of which he had lived, he fell a victim to the pestilence—and amidst the sounds of a universal grief, his spirit went back to the bosom of his God. The gratitude of survivors may rarely have erected visible monuments to their Gillichans, but there are few neighbourhoods which have not been blessed by them. Ever consecrated be thy memory, young martyr to humanity, to duty, to love! I would sooner make a pilgrimage to thy humble tomb—I would rather hang a new garland on the urn which contains thy ashes, than visit the mausoleums of all the Pharaohs, and the Cæsars, and the Napoleons, that the world has ever seen.

Prouty & Mears' Plough.

We find in the American Farmer of the 6th ultimo, a letter dated August 28th, from W. Govane Howard, highly approbatory of this plough. We make from it the following extract.—Ed.

To the Editor of the A. Farmer,—

Dear Sir,—I cheerfully comply with the request you make in your paper of the 23d inst., to give you the result of the trial of Messrs. Prouty & Mears' plough on my farm, and I am sure it will give you as much pleasure to *know* as it does me to "*herald*" the complete triumph of Mr. Pedder and his plough in my clover field. In order that your readers may properly appreciate the merits of this plough, it will be proper for me to say, that there was growing on the field the heaviest growth of clover I have ever seen, that it was just in bloom and lying in all directions, and in addition to all this, the second crop of 1842, which was a large one, was neither cut nor pastured, making altogether the largest bulk of vegetable matter I have ever seen covered; and let me add, that the soil was so very mellow, that with either of my ploughs,—and I believe I owned the very best Baltimore could furnish—the clover and soil would gather in wheelbarrow loads on the mould-board every ten or twelve yards, and yet with the Centre-draught plough, the whole is so entirely covered, that the most practised eye would scarcely be able to discover, after one harrowing, that the field had been in clover—whilst that part of the field which was ploughed with the other ploughs, presents the most unsightly appearance, cart-loads of clover on the surface, and hills and hollows. I have therefore, no hesitation in saying, that it is decidedly the very best plough I have ever seen, and have no doubt it will supercede all other ploughs when it becomes generally known.

Early Health.

Were the genealogy of families to be traced, it would be commonly found that those who occupy what are usually called, by way of distinction, the highest and the lowest grades in society, run out after two or three generations. Among the very poor, mortality is greatest below the age of five years. Among the wealthy, skill and appliances preserve their offspring through the years of childhood, to perish between the ages of fifteen and twenty-five, just as the hopes and prospects of life are dawning upon them. The lineage of the poorest comes to a termination by poverty and wretchedness; that of the richest goes off in chronic and hereditary distempers, gout, apoplexy, and especially, among females, by consumption. Both are replenished from the middling classes of society, who owe their vigor and the perpetuation of their families, rather to the happy fortune of being compelled to labour, to be out much in the open air, and to incur what they call exposures and hardships, than to any knowledge of those laws which they ignorantly observe, but whose observance, is yet generously rewarded.

About seven millions, or one half of the free white population of the United States, are under eighteen years of age. Could we allow to these only an average period of twenty-four or five years, after having reached majority, how important to the country would be their condition as to health and strength! How much more important, yet how much less regarded, than if they were an army of seven millions of men! And what significancy and impressiveness does it give to the fact, that half of mankind die before reaching the age of twenty years. The amount of individual, domestic, social and public interests, dependent upon the physical well-being of this multitude, cannot be appreciated by any finite mind. It is too vast for our comprehension. We can hardly conceive of the latent power which exists even in a single healthy, well-formed infant. What a magazine of forces lies pent up within the narrow limits of its frame! What endurance, celerity, energy, achievement! As a mere material agent, a physical machine, there is something almost sublime in the idea of its hidden capacities and might. Who, without the evidence of observation and history, would be so credulous as to believe, that, in the tiny, flaccid arms of a group of infant children, there were concealed such energies as could turn a granite quarry into the dwellings and temples of a city, or convert a forest into ships, or a wilderness into a garden,—or almost turn the earth inside out to bring up its deep-deposited treasures for human comfort or embellishment! Yet we know that these hapless beings are endowed with innate forces which render such achievements possible and practicable, and that during the period of a short life, they can prepare bounties and blessedness for continents and centuries.—*Common School Journal.*

For the Farmers' Cabinet.

St. John's Wort.

Mr. Editor,—It is some time since I had intended to invite the attention of your readers to the disappearance of a well known plant from our fields, the St. John's Wort, (*Hypericum.*) A few years since, the clover fields of the second year, were overrun with this weed, but for the last two years, I have not met with a single plant, though I have looked for it with some attention, whereever it was likely to be found, through the neighbouring counties in this State, and New Jersey. It is a subject of some interest to the curious in such matters, to know whether there is a *general* extinction of this plant, and also, whether a similar determination has been observed with respect to others. The Sycamore tree seems to be threatened with some exterminating disease; and the geologists inform us of many species of animals, as well as vegetables, which have become extinct. These phenomena have been generally attributed to the various convulsions of the earth's surface; but it may be worth the attention of those who have leisure and opportunity for the inquiry, to endeavour to ascertain, whether it may not be a general law of nature, that vegetables, and perhaps animals too, become extinct after certain series of years.

Yours, &c., S. D. Ingham.

Great Spring, Sept. 25th, 1843.

Great Milker.—A Durham cow, owned by Cyrus P. Smith, Brooklyn, N. Y., gave from 32 to 34 quarts of milk daily, for twenty days, commencing seven days after calving. This was in September. For three months in succession, she gave not less than 32 quarts per day. For ten months she gave an average of 27 quarts per day. Besides hay and grass in their season, she was fed on ground corn and oats, meal, ship-stuff and carrots, sugar beets and potatoes; changing the feed once a week, as it was found that on any one course of feed more than a week, the quantity of milk diminished, and by a change it increased.

The Mechanic in Straits.

BY CHARLES QUILL.

Let the mechanic in straits hope strongly for deliverance. Many are now reduced to great difficulties by changes in the commercial world, which they had no hand in producing. In such circumstances, when the father of a family sees the dearest object of his affections brought into want and distress, there is a great temptation to discontent and repining. This tendency must be resisted; it never did any good, and it never can. No man ever gained by grumbling. Neither complaint, nor recriminations, serve to make the hunger smaller, or the loaf larger. Stick a pin there, and consider. Here is a starting point.

Not many hours ago, I heard *uncle Benjamin* discoursing of this matter to his son, who was complaining of the pressure. "Rely upon it, Sammy," said the old man, as he leaned on his staff, and his grey locks flowing in the breeze of a May morning, "murmuring pays no bills. I have been an observer many times these fifteen years, and I never saw a man helped out of a hole by cursing his horses. Be as quiet as you can, for nothing will grow under a moving harrow, and discontent harrows the mind. Matters are bad, I acknowledge, but no ulcer is any the better for fingering. The more you groan, the poorer you grow.

"Repining at losses, is only putting pepper into a sore eye. Crops will fail in all soils, and we may be thankful that we have not a famine. Besides, I always took notice that whenever I felt the rod pretty sharply, it was as much as to say, 'Here is something you have got to learn.' Sammy, don't forget that your schooling is not over yet, though you have a wife and two children."

"Ay," cried Sammy, "you say that, and a mother-in-law and two apprentices into the bargain. And I should like to know what a poor man can learn here, when the greatest scholars and lawyers are at loggerheads, and can't for their lives, tell what has become of the hard money."

"Softly, Sammy! I am older than you. I have not got these grey hairs and crooked back without some burdens. I could tell you stories of the days of continental money, when my grandfather used to stuff a sulkey-box with bills, in order to pay for a yearling or a wheat-fan; and when Jersey women used thorns for pins, and laid their tea-pots in the garret. You wish to know what you may learn! You may learn these seven things.

"First, *that you have saved too little, and spent too much.* I never taught you to be a miser, but I have seen you giving your dollar for a 'notion,' when you might have laid one half aside for charity, and another half for a rainy day.

"Secondly, *that you have gone too much upon credit.* I always told you that credit was a shadow; it shows that there is a substance behind, which casts the shadow; but a small body may cast a great shadow; and no wise man will follow the shadow any further than he can see the substance. You may now learn that you have followed the opinion and fashion of others, until you have been decoyed in the bog.

"Thirdly, *that you have been in too much haste to become rich.* Slow and easy wins the race.

"Fourthly, *that no course of life can be depended on as always prosperous.* I am afraid the younger race of working men in America, have had a notion that nobody could go to ruin on this side of the water. Providence has greatly blessed us, but we have become presumptuous.

"Fifthly, *that you have not been thankful enough to your heavenly Father, for his blessings in times past.*

"Sixthly, *that you may be thankful that our lot is no worse;* we might have famine, or pestilence, or war, tyranny, or all together.

"And lastly, to end my sermon, you may learn to offer the prayer of your infancy, '*Give us this day our daily bread.*'"

The old man ceased, and Sammy put on his apron, and told Dick to blow away at the forge.—*Exchange paper.*

Top-dressing with fermenting Manures.

If so large a waste occur in the farm-yard where the manure is left long to ferment—can it be good husbandry to spread fermenting manure as a permanent top-dressing over the surface of the fields? This, also, is a question in regard to which different opinions are entertained by practical men.

That a considerable waste must attend this mode of application, there can be no doubt. Volatile matters will escape into the air, and saline substances may be washed away by the rains, and yet there are many good practical farmers who consider this mode of applying such manure, to be in certain cases, as profitable as any that can be adopted. Thus—

1°. It is common in spring, to apply such a top-dressing to old pasture or meadow lands, and the increased produce of food in the form of grass or hay, is believed to be equal, at least, to what would have been obtained from the same quantity of manure

employed in the raising of turnips. Where such is really the case, experience decides the question, and pronounces that notwithstanding the loss which must occur, this mode of applying the manure is consistent with good husbandry. But if the quantity or market value of the food raised by a ton of manure applied in this way, is not equal to what it would have raised in turnips and corn, then it may as safely be said that the most economical method of employing it has not been adopted.

But theory also throws some interesting light upon this question.

Old grass lands can only be manured by top-dressings. And if they cannot continue, and especially such as are meadowed, to yield an average produce, unless there be now and then added to the soil, some of those *same* substances which are carried off in the crop, it appears to be almost necessary that farm-yard dung should now and then be applied in some form or other. It is true, that hay or straw, or *long dung*, contains all the elements which the growing grass requires, but if spread on the surface of the field, and then allowed to ferment and decay, the loss would probably be still greater than when, for this purpose, it is collected into heaps or strewed in the farm-yard. Thus the usual practice of laying on the manure in a highly fermented state, *may* be the most economical.

2°. Again, where the turnip crop is raised in whole or in part by means of bones only, of rape-dust, or of other artificial manures, as they are called, it is usual to expend a large proportion of the farm-yard dung in top-dressing the succeeding crop of clover. Thus the land obtains two manurings in the course of the four years' rotation—bones or rape-dust with the turnips—and fermented dung with the clover. This second application increases the clover crop in some districts, one-fourth, and the after crop of wheat or barley, very considerably also.*

Here, also, it is clear, that if manure be necessary to the clover, it can only be applied in the form of a top-dressing. But why is it necessary, as experience says, and why should farm-yard manure, which is known to suffer waste, be applied as a top-dressing rather than rape-dust, which in ordinary seasons, is not so likely to suffer loss! I offer you the following explanation:—

If you raise your turnip crop by the aid of bones or rape-dust alone, you add to the soil what, in most cases, may be sufficient to supply nearly all the wants of that crop, but *you do not add all which the succeeding crops of corn and clover require.* Hence, if these crops are to be grown continuously, and for a length of time, some other kind of manure must be added—in which those necessary substances or kinds of food are present, which the bones and rape-dust cannot supply. Farm-yard manure contains them all. This is within the reach of every farmer. It is, in fact, his natural resource in every such difficulty. He has tried it upon his clover crop in the circumstances we are considering, and has necessarily found it to answer.

Thus to explain the results at which he has arrived in this special case, chemical theory only refers the practical man to the general principle upon which all scientific manuring depends—that *he must add to the soil sufficient supplies of every thing he carries off in his crops*—and, therefore, that without some such dressing as he actually applies to his clover crop, he could not long continue to grow good crops of any kind upon his land, if he raise his turnips with bones or rape-dust only.

It might, I think, be worthy of trial, whether the use of the fermented dung for the turnips, and of the rape-dust for top-dressing the after crops, would not, in the entire rotation, yield a larger and more remunerating return.—*Johnston's Lectures on Agricultural Chemistry.*

* Such is the case upon some of the farms in the Vale of the Tame (Staffordshire,) where the turnips are raised with rape-dust, and wheat follows the clover.

CURIOUS RESULT.—A friend has shown to us some scions, which he has just received from a gentleman on Grand Isle, Vt., which produce apples partly sweet and partly sour. This singular production was brought about in this manner. A bud was taken from an apple tree producing sour fruit, another from one producing sweet; the two buds were neatly cut into halves, and a half of each kind joined together, forming a bud which was inserted in the stock as usual.

We have often heard of this method of producing two distinct varieties of fruit in the same apple, but we have doubted it, and though our information appears to come now from a very respectable source, we are rather incredulous, though such a thing may be possible. It is easily tested, and we hope the point will be settled. Our friend thinks to test by getting the two kinds of fruit from the scions sent him, but whatever fruit they may produce will prove nothing, unless there is proof of their origin. We have seen of natural fruit, sweet and sour fruit in the same apple. We advise him to be thorough in his experiment, and begin with the bud.—*Southern Cultivator.*

For the Farmers' Cabinet.

Ergot--Inoculation of cheese, &c.

At the last December meeting of the Linnæan Society in London, A. H. Hassell, Esq., exhibited an apple in which decay had been artificially induced, by inoculating it with decayed matter from another apple, containing filaments of entophytal *Fungi*. This reminds me of a mode of inoculating a new cheese, and communicating to it the flavour and appearance of an old one, that was mentioned some years ago by the Secretary of the Royal Society of Edinburg. It may readily be done by inserting into the new cheese, portions of an old one containing blue mould. The common cheese taster offers a ready instrument for effecting the purpose. Ten, or a dozen of the rolls it extracts from the old cheese may be placed in the new one, so as to disseminate the germ of the blue mould all over the cheese. A half of a cheese may be treated in this way, and the other half left in its natural state; and those who prefer the old to the new, will be struck with the superiority of the one, over the other. A cheese treated in this way, should be covered from the air for a few weeks, when it will be scarcely distinguishable from a genuine old cheese.

At the same meeting, as we learn from a late Number of the "Annals and Magazine of Natural History," Edwin John Quekett, Esq., F. L. S., communicated some observations and experiments on the nature of the Ergot* of grasses, that are very curious and interesting, and which I send for the Cabinet. The Ergot on wheat is of rare occurrence here—I never saw it on barley: on rye, it is not unfrequently quite injurious to the crop. M.

In March, 1840, twelve healthy grains of rye, of wheat, and of barley, were placed in a shallow glass vessel, containing a sufficient quantity of distilled water to moisten them, and covered with a glass shade. When germination commenced, an ergot of wheat of the preceding year, was immersed in the water, the sporidia on its surface were detached, and the ergot itself was then removed. The same experiment was performed with sporidia obtained from an ergot of *Elymus sabulosus*. Several days afterwards, when the leaves had attained a length of three or four inches, the young plants were conveyed into the country and planted side by side in a garden. At the period of harvest, there remained alive only four plants of the rye, one of which had been infected from the ergot of *Elymus*, and the remaining three from that of wheat, —three of the barley, and four of the wheat. Of the rye, scarcely a single ear produced healthy grains, the paleæ being generally quite empty; but nine of the ears contained ergots, some furnishing only a single specimen, and others as many as six. The ears of the barley were filled with healthy grains, and only one apparently diseased grain was detected; while in the wheat the ears were full and without disease.

As in these experiments no grains from the same sample were sown which had not been subjected to the influence of the sporidia of the fungus, Mr. Quekett made in the following autumn another experiment, with the view of supplying this deficiency. Twelve grains of rye, of wheat, and of barley, were again made to germinate under similar circumstances to the last, and the sporidia obtained from the surface of one of the ergots of rye produced in the first experiment, were diffused in the water in which they grew. These were planted in October, on the same estate, but not within half a mile of the former spot; and twelve healthy grains of each kind, which had been carefully kept apart from the others, were planted in the same locality. Very few of the plants arrived at maturity, and in August last, there remained of the infected plants, only two of rye, two of wheat, and one of barley; and of the uninfected plants, one of each kind. On each of the plants of rye which had been subjected to the influence of the sporidia, an ergot was discovered, and the ears as before, were almost entirely devoid of healthy grains; while the plants of wheat and barley subjected to the same influence, produced perfect ears and healthy grains. The three plants of rye, wheat, and barley, planted at the same time, without exposure to the sporidia of the fungus, presented no unhealthy appearance.

Mr. Quekett argues, that all the grains of rye subjected, during germination, to the

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* *Rennie*, in his Alphabet of Botany, speaks of the *Ergot insect*, as a four-winged fly, similar to the *aphis* of the rose, but one-half smaller, and darker green, with black markings. He says he ascertained in numerous instances, in 1832, that the ergot of rye, *Secale cornutum*, is a morbid enlargement of the grain, caused by the puncture of this insect, and not, as it is represented by some, a fungus, *Spermædia clavus*. Loudon, however, in his Encyclopedia of Plants, places the ergot of rye, in the body of his work, among the *fungi*, and speaks of it in the second part, as a *parasitic fungus*. Brande, also recognises it as a *fungus*, possessing important medical properties. This is a curious subject for the naturalist. Fries, one of the best writers on Fungi, considers the lowest of them to bear the same relation to plants, that Entozoa do to animals.—Ed.

influence of the sporidia of the fungus, in both sets of experiments, having produced plants infected with ergot, while the plants derived from grains not so subjected, escaped disease, a convincing proof is afforded that their infection could not have been the effect of chance, but must have resulted from the artificial introduction of the sporidia; and that the infection of the rye only, while the wheat and barley escaped, is to be attributed to the greater susceptibility of the rye to infection, as proved by the much greater frequency of the production of ergots in that species of grain.

The Canada Thistle,

Will grow on the poorest soils, and seems more partial to clay, or soils inclining to clay, than any other, probably from its tenacity and adhering to the light downy substance attached to the seed, and retaining it where it vegetates the ensuing spring. By means of this down, it floats in the air and is scattered to great distances. It is generally found on naked or uncultivated spots, and by the road-side, seldom or never on fields in grass.

It is often introduced by grass seeds, particularly timothy and clover, which have been gathered where the thistle is prevalent, and which has probably been the principal means by which it has been introduced into this State. The banks of our canals and rail-roads, are lined with them. Thirty miles north of this, they seem to have obtained a foothold so permanent, that they have not only taken possession of the sides of the roads, but whole fields are covered with them. About five or six years since, when on a visit to that section, I was much surprised at the apparent apathy with which the farmers viewed them. They were then ripe, and the air filled with their light, downy seed, floating in every direction.

Ploughing and working among them, unless it is followed up with a *determination* of extirpating them, seems rather to increase than destroy them. It is my opinion, from careful observation, that they spread from the roots, and according to the best of my calculation, at the rate of four to five feet in every direction; and the result of my experiments, observations and reflections, has brought me to the following conclusions and theory: that by whatever means the foliage, or leaves, or stalks of the plant are continually and frequently destroyed for one season, or two at most, during the months of June, July, August and September, will destroy the Canada thistle.

It is a settled principle in physiology, that leaves are as essential to vegetables, as lungs are to animals; and that without the healthful exercise of these organs, both the vegetable and the animal will become diseased and ultimately die. Leaves are as necessary to the roots of plants as roots are to the leaves; they are mutually dependent on each other, and one cannot long exist without the other. The repeated and complete defoliation of a plant, therefore, must soon be fatal to its roots, and an effectual mode of eradicating them.

CALEB N. BEMENT.

Three-hills Farm, N. Y., July 4th, 1843.

HATCHING APPARATUS.—They have a machine for hatching eggs, now actually in use in London, bringing out the little chickens in broods of fifties and hundreds, with all the punctuality of an old hen. The following is the advertisement of the machine, as we find it in the London papers of the 2nd inst., which we insert gratis, just for the sake of spreading a knowledge of the invention:

"Hatching Apparatus! Reduced prices—from eight to sixteen guineas.—Messrs. Todd & Son, of Bury street, Bloomsbury, beg to call the attention of the public to their portable patent Hatching and Rearing Apparatus, being the original manufacturers. This successful invention is capable of hatching, at a trifling expense, any number of game and poultry eggs of all sorts, from 50 to 200, at one time, and possesses the further recommendation of furnishing poultry for the table at a trifling cost, at all periods of the year. For further particulars apply to the manufacturers. A machine may be seen in use daily."—*S. C. Temperance Advocate.*

"SINCE man is but an instrument to direct the machinery placed at his command by Infinite Wisdom, it is not likely that he can discover the minutiæ of first causes. He is an observer who ought to make and register the results of his observations; and in proportion as he does so, he will obtain a knowledge of effects from which he may infer the existence of certain general laws."

THE vegetable origin of coal is now universally admitted by geologists; and, when we discuss the probable manner in which the terrestrial plants from which it was derived were imbedded in marine shale and sandstone, we shall find it necessary to suppose a long succession of operations.—*Lyell's Elements of Geology*—vol. 1. p. 59.

Experiments and Observations on the Production of Butter.

At a late meeting of the Highland Agricultural Society of Scotland, a paper entitled "Experiments and Observations on the Production of Butter," by Professor Traill, was read by the author. These experiments were made in connection with the late Dr. Gerard, of Liverpool, who had paid much attention to the subject, and assistance was occasionally given by Dr. Bostock, now in London. The experimenters had a dairy of four, sometimes of five cows at their disposal; but after numerous preliminary trials, they found that the numerical results, on the quantity of the butter obtained, were most uniform and satisfactory, when each experiment was made on a few pints only. The process could thus be carried on in glass vessels, which enabled them to observe the progress of the operation, to collect the produce more carefully, and use a more delicate balance to ascertain the weight of the butter obtained. This likewise enabled them to make the comparative experiments on the same milk on the same day, a point regarded as of essential importance, as the richness, even of the same cow's milk, is liable to vary considerably from day to day, according to the nature of her food, her health, and possibly, too, according to the state of the weather. The time which had elapsed since the last calving, was also found to have much influence on the quantity of the butter. The quantity of butter was smallest, and the proportion of cheesy matter greatest, just after calving; and generally speaking, the milk of those cows which yielded the *least* quantity, was richest in butteraceous matter.

One of the principal objects in view, was to ascertain the comparative advantages of churning.

1. Sweet cream alone.
2. Sweet milk and cream together.
3. Sour cream, or that slightly acid.
4. Sour milk and cream together.
5. Scalded cream, or what is called *clotted* cream, as practised in Devonshire.

The principal results of the experiments are the following:

1. That the addition of some cold water during churning, facilitates the process, or the separation of the butter: especially when the cream is thick and the weather hot.

2. The cream alone is more easily churned than a mixture of cream and milk.

3. The butter produced from sweet cream has the finest flavor, when fresh, and appears to keep longest without becoming rancid; but that the buttermilk so obtained, is poor, and small in quantity.

4. That scalding the cream according to the Devonshire method, yields the largest quantity of butter, which, if intended for immediate use, is agreeable to the palate and readily saleable; but if intended to be salted, is more liable to acquire, by keeping, a rancid flavour.

The process of scalding is troublesome, and the milk, after the removal of the cream, is poor, and often would be unsaleable from the taste it has acquired from the heating.

5. That churning the milk and cream together, after they have become slightly acid, seems to be the most economical process on the whole; because it yields a large quantity of excellent butter, and the buttermilk is of good quality; a point of some importance, where buttermilk is largely used as an article of diet, as it is in Lancashire.

6. That the keeping of butter in a sound state, appears to depend on its being obtained as free from uncombined albumen, or caseine and water, as it can be, by means of washing and *working*, when taken from the churn.

The author mentioned the interesting fact that, in the course of his experiments, he found when sweet milk and cream were churned together, and though cold water was added, after an hour and a half, and then after three hour's churning, not a particle of butter was obtained.—*Massachusett's Ploughman.*

Two young men, of the more respectable class of mechanics, commenced the sail-making business at Philadelphia. They bought a lot of duck from Stephen Girard, on credit, and a friend had engaged to endorse for them. Each caught a roll and were carrying it off, when Girard remarked:

"Had you not better get a dray?"

"No; it is not far, and we can carry it ourselves."

"Tell your friend he needn't endorse your note—I'll take it without," said Stephen.

Immense Product.—We learn that Hill Carter, Esq., of Shirley, on Jamer river, Va., reaped from 160 acres, 5,280 bushels of wheat, averaging 33 bushels per acre! This is unequalled in Virginia agriculture. His whole crop of wheat, on 270 acres, reached the large quantity of 8,000 bushels, being an average of nearly 30 bushels per acre.

At Westover, the seat of John N. Selden, Esq., on James river, 100 acres of wheat averaged 30 bushels per acre; also a noble product.—*National Intelligencer.*

Mott's Patent Agriculturist's Furnace.

This article was constructed in consequence of a suggestion from the American Institute—that a simple, portable, and low priced furnace was much wanted by farmers, for boiling and steaming food, preparing maple for beet-root sugar, and for many mechanical purposes.

It is so formed, that a space from one to two inches is left between the boiler and the casing that surrounds it, causing the heat in its passage to the pipe, to encircle all parts of the boiler, even to its upper edge; and hence requiring but little fuel. Being portable, it affords many advantages over boilers set in brick-work, besides requiring less room and fuel. Any farmer may conveniently construct a steamer and add to this furnace, for steaming food for stock, if he prefers steaming to boiling. To be had at No. 176, Market street, Philadelphia.

Cultivation of the Sun Flower, &c.

Mr. Fleetwood has written a pamphlet, in which he enumerates, from positive, and unerring data, many circumstances concerning the successful cultivation of this plant, and the production of its oil: the generally useful applicabilities of which must ensure for it an almost unlimited sale, independently of the value of its cake, or residuum, after expression of oil from the seed.

This cake has been found, on repeated trials, to be far superior to linseed cake, as diet for cattle. He has pointed out the causes of miscarriage which have hitherto attended others in the cultivation of this flower; and which, if left unremedied, must deprive the inhabitants of these islands of the manifold blessings which it is capable of conferring. He has, further, given from the best authorities, a distinct view of the waste bog, and other uncultivated grounds, in the respective shires and counties in the United Kingdom; with the hope of stimulating those who, in the agricultural world particularly, may have it in their power to encourage its culture. In alliance with the subject of the *helianthus* or sun-flower, he has noticed the importance and utility of propagating ginseng as an article of export to China.—Throughout the northern portion of the American Union, though not an indigenous plant, it is already cultivated to such an extent, that within the last twelve or fifteen months, no less than a million of dollars' worth has been exported to the Celestial Empire; where it met with an immediate market, as appears by the report of the Commissioner of patents to the American Congress, dated February 1st, 1843. The pamphlet likewise invites public attention to the cultivation of sage on a grand scale, that herb being an article of considerable importance in Chinese commerce. Valmont de Bomari's Dictionaire d'Histoire Naturelle, states that the Chinese are so fond of sage, (which does not grow in their vast empire,) that they wonder how Europeans should come to their country for the purchase of tea, seeing they possess so valuable an herb at home. De Bomari further states, that the Dutch buy up the whole of the sage which grows on the coast of Provence, and carry it to China, where they have a ready market for it, both with the Chinese and Japanese; in many cases obtaining in exchange for one chest of sage, two or three of green tea!

As the experiment of cultivating and exporting sage to China, could easily be made at a very small expense, by the united efforts of half a dozen growers—and if the assertions of M. de Bomari be confirmed by its success, the benefit that would accrue from the extensive cultivation of this garden herb in these islands would be immense. So sanguine is Mr. Fleetwood, with respect to his theories, that he has announced his intention to negociate with land proprietors throughout the United Kingdom, for various plots of waste or other lands, from five to ten or twenty thousand acres, for the cultivation of the sun-flower, the seed of which, from Turkey, the Levant, America and Germany, he has obtained at considerable pains. At Miller's farm, near Kingston in Surrey, he has planted this year twelve acres, where lovers of agricultural improvement and the useful arts, are invited, for the purpose of inspection; as well as to a limited plantation of between two and three hundred square yards, at his own residence, No. 12, East Suffolk Street, King's Cross, London.—*Chambers' London Journal.*

On the Preparation and Use of Manures.

BY WILLIS GAYLORD, OF OTISCO, N. Y.

Introduction.—Of all the pursuits to which mankind, from necessity or inclination, have devoted themselves, there is none more honourable,—certainly none more useful,—than that of agriculture. To pursue this business successfully, knowledge, extensive and varied, is required; for, although a man may succeed by following the beaten paths of his predecessors, occasions will frequently arise, when the end desired may be attained by methods much shorter than those usually adopted, if the farmer is able to form and apply them. It is here that science has, within a few years, rendered the most essential aid to agriculture. Sometimes, reasoning from well known effects to their causes, the agricultural chemist has placed in the hands of the farmer the means of producing results, always desirable, but which, under the older systems of farming, with his utmost care, he frequently failed of obtaining. Again, taking well established facts in animal or vegetable physiology, as his starting point, he has arrived at results of the highest practical importance, and is enabled to render more certain and effective the more tardy operations of nature. In no department of agricultural industry, it is believed, have the labours of science been more beneficial or more apparent, than in that of the preparation and use of manures; certain it is, there is no department more deserving attention, or where an elucidation of the principles and laws that govern the growth of plants, acts with a more direct and energetic influence.

Definitions.—A definition of the term manure, may be necessary, in order to treat the subject understandingly, as different individuals use the word in widely different senses, some in a wide, and some in a limited one. A few instances of the meaning put upon the term will be given from a few of the modern writers who have adverted to this topic. Thus Dr. Leiber, in his German Conversationes Lexicon, defines manure to be "vegetable, animal, and mineral matters, introduced into the soil to accelerate vegetation, and increase the production of crops." The Encyclopedia, published by the London Society for the promotion of Useful Knowledge, thus defines it:—"Every substance which has been used to improve the natural soil, or to restore to it the fertility which is diminished by the crops annually carried away, has been included in the name of manure." Loudon, in his great work on agriculture, says: "Every species of matter capable of promoting the growth of vegetables, may be considered as manure." Prof. Low, in his Elements of Agriculture, says: "All substances which, when mixed with the matter of the soil, tend to fertilize it, are in common language termed manures." Mr. Johnson, in his "Farmers' Encyclopedia," lately published, says: "A manure may be defined to be any fertilizing compound or simple ingredient added to a soil, of which it is naturally deficient." The definitions of Prof. Liebig and Dr. Dana, two of the latest writers on the subject, do not differ essentially from those already given. Of these definitions, I prefer the most simple and comprehensive, that of Loudon, and in this paper shall consider the term manure, as embracing every substance capable of promoting the growth of plants.

Classification.—Manures, by some, are classed as earthy, organic and saline; others divide them into animal and vegetable, mineral and mixed manures, and some speak of them as composed only of geine or humus, and salts. Others class them as organic and inorganic; but these divisions are of little consequence, as every farmer understands that manure is the result of decomposition or change; and that, whether organic, that is, derived from animal or vegetable matter; or inorganic, such as the earths, clay, lime, the alkalies, &c., it is only efficient when presented to plants in certain forms, such as decomposition, division or solution. In France, they have terms to distinguish those substances which act mechanically in improving the texture of the soil, from those which act directly in the nourishment of the plant. The former class of substances they call *amendements*, and the latter *engrais*. It is probable, however, that the system which considers all manures as consisting of humus or geine, and salts, comprehending, in the latter term, all the mineral substances that enter into the growth or nourishment of vegetables, will eventually be found the most simple, and at the same time the most accurate, of all the proposed divisions of manures. Thus humus constitutes the source of the carbon, forming the principal part of the structure of plants, and the salts, where they do not enter into the structure of plants, are active in preparing the other inorganic elements, and exciting the vegetable organs in their reception and appropriation of nutriment.

Humus or Geine.—Humus or geine, is simply decomposed animal and vegetable matter; and as from it, by the action of oxygen, carbonic gas is derived, to be absorbed by water and taken up by the roots, or mixed with the atmosphere and taken up by the

leaves of plants; or, as some agricultural chemists with good reason suppose, is under certain circumstances dissolved, or is soluble, and thus rendered fit for immediate nourishment to plants, it must be considered the most important item in the production of manures. The salts, which are the most efficient in aiding vegetation, or the most active manures, are those formed from the alkalies and their various combinations. Thus, from pure lime or calcium, is formed, by the union with carbonic acid, *carbonate of lime;* with phosphoric acid, *phosphate of lime*, the base of bones, one of the most efficient of fertilizers; with sulphuric acid, *sulphate of lime*, or gypsum, the value of which is well understood; and so with the other alkalies, which, in their combinations, form substances of the utmost consequence to plants. It is well known that the outer covering of some kinds of cane, contain so much flint or silex, as to strike fire with steel; and some of the grasses contain this substance in such quantity that their ashes will melt into glass with potash. Now, this hardness, so necessary to their perfection, could not be attained unless this flint had been rendered soluble by union with an alkali, forming a silicate of potash, and by this solubility been rendered fit for the action and appropriation of the plant.

Food of plants.—If we would know what kind of food is required by plants, one of the first steps necessary, is to ascertain of what the plants themselves are composed. The combinations of matter may be said to be absolutely endless; but the original elements of this multitude of combinations, are few in number. Chemistry has detected only some fifty-five substances incapable of further reduction, or what are called simple substances; and of these, strange as it may appear, only four, except in proportions merely accidental, go to the formation of plants. Of these the first is *Carbon.* This forms from 40 to 50 per cent. by weight, of the plants cultivated for food; and is therefore most important to animals and to man. The second of these simple substances, is *Oxygen.* The quantities of this substance are immense; and though we are acquainted with it only in the form in which it exists in the air, nearly one half of the solid crust of the globe, 21 per cent. of the atmosphere, eight pounds in every nine of water, and more than one half of the living bodies of all plants and animals, are oxygen. *Hydrogen* is the third substance peculiar to plants. This is the lightest of known substances, and forms a small part of the weight of all animal and vegetable bodies; constitutes one-ninth part of the weight of water, but enters into the composition of none of the masses that go to form the crust of the globe, coal excepted. The fourth simple substance, entering into the formation of plants, is *Nitrogen.* This forms 79 per per cent. of the bulk of the atmosphere, constitutes part of most animal and some vegetable substances; is found in coal to the amount of one or two per cent., but does not exist in any other of the mineral masses constituting the crust of the globe. Although not an abundant substance, the importance of it is not the less decided, and some of its functions are of the most indispensable kind. Plants then, are composed of carbon, oxygen, hydrogen, and nitrogen; the first derived from carbonic acid, the second from the atmosphere, the third from the decomposition of water, and the fourth from ammonia absorbed by water, and taken up by the roots of the vegetables. Some of the earths are occasionally detected in plants, and salts of some kind are always present. In the preparation of manures, the principal object to be aimed at, it is evident, must be to supply the materials needed to furnish the carbon and the ammonia; and these are found in the greatest abundance in dead, or decomposed animal and vegetable matter.

Law of Nutrition.—It seems to be a law of nature, that the higher the grade of the animal, or the more complicated its organization, the greater the necessity of a corresponding degree of organization in the substances used as food: indeed the manner in which the crude materials, found in the earth and atmosphere, are worked up by plants into a state suitable for conversion into the flesh of animals or food for man, exhibits the strongest proofs of benevolent design in the formation of such grades of organized matter. Man can, indeed, live on plants, but his teeth demonstrate that flesh was to constitute no inconsiderable portion of his food. As all animals receive their food, either directly or indirectly, from the vegetable kingdom, it is evident their excrements, or their decomposed bodies, must form manures of the most valuable kind; and it is to this source, the excrements of animals, that the farmer must look for his supply of manures to restore the fertility of the soil. In treating further of manures, it will be best to begin with this, as the most important class.

Animal manures.—A late British writer on agriculture, says: "The chief use of cattle on an arable farm, besides those necessary for the operations of husbandry, is to produce manure for the land. If the cattle repay their food, and the expense and risk attending their keep, the manure is suffi-

cient profit. Even with a moderate loss, they must be kept, when manure cannot be purchased. The loss, if any, on the cattle, must be repaid by the increase of the corn crops. Manure is to a farm, what daily food is to an animal; it must be procured at any sacrifice." Common barn-yard or stable manure is the kind to which most farmers must look for the fertility of their farms. This consists of the droppings of the cattle, mixed with the straw used for littering in stables, or thrown into the yards for the animal to feed or lie upon, the coarser hay and weeds refused by the stock, and the urine of the animals kept in the stables or yards. This is constantly trampled, is usually kept moist if not wet, and is finally decomposed, or converted into manure fit for the production of crops. This is the most usual course, but it is evident that there must, in this method, be a serious loss to the farmer, of the more valuable properties of the manure. In this way, the decomposition is unequal; a part will be converted into mould, while the other will be scarcely acted upon; the salts and the more soluble parts of the excrements, which are the most efficient ones, are dissolved by the rains, and carried off by the drains, or lost in the earth; and where any considerable degree of heat is evolved, as there will be when the decomposition is rapid, or is going on in large masses, the escape of ammonia, so easily detected by the smell, shows that the nitrogen, so essential to the growth and perfection of a grain crop, is rapidly wasting.

Preparation.—To prevent these results, and secure the whole benefit of the manure, two methods have been adopted. The first consists in applying the manure fresh, or in a long state, to the fields it is wished to manure, without waiting for it to decompose. In this way the manure collected in the yards during the winter, is removed in the spring, and applied to such crops as require it the most; and as no fermentation ensues in ordinary cases, until the commencement of hot weather, two sources of loss at least are avoided, those of the washing away of the soluble parts, or their being carried off in the shape of gas. Where there exists no necessity for retaining manures for other than spring crops, and where the crops cultivated are such that long manures are suitable for their growth and tillage, this mode of disposing of manures must be considered one of the best that can be adopted. But in many cases the formation of manures in the yards and stables of the farmer is going on the whole year; and preservation in masses, or by being scattered in yards during the hot months, would be greatly to lessen, if not mostly to destroy its value. Besides, there are some crops, such as some of the root crops, in the cultivation of which experience has proved fully, that rotted or decomposed manure is far preferable to long manure, as much of it is already in a soluble state, and is available to the plants at the time they need hastening the most, which is the period immediately after germination. Where the waste of manure is to be prevented during the summer months, or it is desirable to provide a quantity of fully rotted manure, then the second method should be used; and this indeed, by many excellent farmers, is considered the best in all cases.

Fermentation.—In this method, the practice is to remove the dung from the stables and yards at short intervals, and place it in large piles or masses, that the proper fermentation may take place previous to its use. When a pile of manure is made in this way, the fermentation takes place in the quantities applied, as they are successively deposited, and therefore does not reach usually that point in which material loss is sustained. If it is found that the heat is becoming too great, or the fermentation injuriously rapid, so as to cause the escape of ammonia, a layer of earth or sods placed over the pile, will retain, by combination, the escaping gases, and thus prevent the loss. It has been found a most excellent plan, one which not only greatly increases the quantity of manures made in this way, but adds to its quality, to mingle with or cover the successive deposits of manure, with earth from ditches or ponds, peat or muck from swamps, or turf from bogs or ploughed lands, as such layers, consisting mostly of vegetable or animal matters, will, by absorbing the drainings of the manure, or the absorption of the escaping gases, be converted into one of the most efficient of fertilizers. The more solid such deposits of manure are made, the more slow will the fermentation be, and hence in unloading, the carts or wagons may be driven over them if necessary to expedite the work, where the immediate use of the manure is not an object. Should the dung placed in these heaps be too slow in fermenting, it may be hastened by opening the piles, or still better by making holes in the top, into which the wash of the yards and the urine of the stables may be poured. This method has another advantage. The manure from the yards, if not wanted as long manure, may be removed to the fields where it is to be used, at times when the men of the farm cannot be otherwise profitably employed, and

will be at hand, ready fermented in these piles, when a further transportation might be difficult if not impracticable.

Long or rotted.—It is a question of considerable importance to the farmer, and one which has been much discussed, whether it was better to apply manure in its long state always, or always allow its full decomposition before using. From his own experience, the writer has been led to doubt the correctness of either of these positions. It seems to be universally admitted that matter, to be efficient as a manure, must be soluble, and it is clear that the more solid parts of farm-yard manure require to be softened by putrefactive fermentation before they can be considered in this state. Where, then, the influence of manure is required to be felt at once, as on the turnip, beet and carrot crops, in order to push them forward at the first start beyond the reach of insects, my experience is, that the manure should be in a state reducible to powder, in which condition a large portion of it may be expected to be soluble, and of course, at once available by the plant. Where, during the fermentative process, the mass has been reduced to a black carbonaceous matter, it may be inferred that the heat was too great, and the manure seriously damaged; on the contrary, if the mass, while perfectly fine, dry and friable, still retains its dark brown colour, it will usually be found that none of the good qualities have been lost by over fermentation.

But where the manure is to be applied to crops which do not require forcing forward in the early part of their growth, but demand as much or perhaps more nutriment, at a late period of their vegetation, to perfect their seeds or roots, then experience has shown that it is best to apply the manure without any considerable fermentation to the soil. Indian corn, potatoes, and the grain crops generally, are of this class; the two first particularly. The time when corn and potatoes require the most nutriment, is at the time when the ears and tubers are forming; and when manures but partially fermented, or used fresh from the yard or stable, are applied, the decomposition is comparatively gradual, and the supply greatest when most needed. I cannot recommend the application of manures of any kind directly to grain crops, as it has a tendency to give straw at the expense of the grain, and wheat so manured, is far more apt to suffer from mildew or rust, than when the manure, by application to other and previous crops, has become perfectly incorporated with the soil. In this state, that rapid growth, which is the result of first fermentation, is avoided by the wheat plant; and the substances necessary to perfect the berry are already prepared and within reach of the growing or maturing plant.

Quality of Dung.—Dung varies much in its quality, not only from the perfection or imperfection of the fermentation to which it is subjected, but also from the animals producing it, and the food which animals receive. The richest and most effective manure we have ever used, was that from the hog yard, and produced by fattening hogs. That from cattle, fed on corn meal and oil cake, will be little inferior; and either will be found 100 per cent. better than ordinary farm-yard manure. The reason of this is very plain. Such animals are fed with substances abounding in the materials most needed by plants, with very little admixture of useless matter, and the comparatively small quantities of animal matter and salts added, rather contribute than detract from its efficacy. The dung of sheep is more valuable than that of horses or cattle not fattening, as the materials are more perfectly assimilated or mixed in mastication, and more fully decomposed.

Green crops.—Next to farm-yard manures, to keep up the fertility of his lands, the farmer may most certainly rely on green crops, either fed off upon the land, or turned under by the plough, and there allowed to ferment and decompose. For a plant to enrich exhausted soils, affording as it does, both top and roots to a large extent, there is no plant equal to clover; and particularly where it is necessary or desirable to have the green crop fed off by animals. I prefer letting the clover grow until nearly or quite in blossom, and then turning sheep upon it. They will eat much of it and fatten rapidly; but they will trample down more, and this, mixed with their dung, forms in its decay, a most efficient top-dressing; and repeated for two or three years, forms an admirable preparation of the soil for wheat or other grains. When a crop is cultivated to be ploughed in, it should be done at the time when the plants contain the greatest quantity of nutritive matter, and have least exhausted the soil in which they are growing. This, in most cases, will be when the plants have come fully into flower. At an earlier period there may be as much weight, but a larger portion of it will be mere water; and, if allowed to stand much later, the soluble matter is lost in the seed, and the ligneous part of the stem becomes more difficult of decomposition. Buckwheat is a good plant for a green manure; its growth is rapid, and gives a great weight per acre, and two crops may be ploughed under in a year. The best

way of ploughing in such green crops, is to pass a heavy roller over them, which lays the plants close to the ground, and greatly facilitates covering them by the plough. It is believed that corn, sown broad-cast, and when just showing its tassels, cut and covered by the plough, would be one of the best crops that could be chosen for this purpose. A man or boy, in this case, would be required to follow the plough, to place the corn in the furrow for covering, at the next passage of the plough. Taken at this time, corn abounds in nutritive matter, and could scarcely fail of proving a first-rate fertilizer of the soil.

Peat.—A variety of decomposed vegetable matters, or those partially decomposed, are used as manures. The fallen leaves of trees are of this class; but the instances are few in which they will repay the expense of gathering; perhaps never, in the United States, where other sources of an abundant supply of manures are so numerous. If collected, the best method of using them, is to litter stables, or form beds for pigs, or mix at once with other manures; as, in such ways, they absorb urine and other fluids that might escape, and together undergo decomposition. But the most important source of decayed vegetable matter, and one, the value of which is not yet by any means sufficiently understood or appreciated, is to be found in the great deposits of this substance in swamps, low meadows, and peat bogs, in all parts of our country. On the subject of this kind of manure, there is no authority equal to Dr. Dana, of Lowell, Massachusetts. According to him, peat consists of soluble or insoluble geine or humus, with a few salts. From an analysis of ten specimens from different parts of Massachusetts, the higest and the lowest in the scale of soluble geine, is selected and given here, as well as two specimens of pond mud. This is done, as the value of neither peat nor such mud is sufficiently appreciated by the farmer; and they are neglected when they might easily be made a source of the greatest fertility:

Analysis.

	Soluble Geine.	Insoluble Geine.	Total Geine.	Salts and Silicates.
Peat.	10.15	49.45	59.60	40.40
	48.80	43.60	92.40	7.60
Pond Mud.	5.10	8.90	14.	86.
	8.10	6.50	14.60	84.40

Comparison with cow dung.—In his analysis of various manures, he takes for his standard, cow dung; and it is not a little remarkable that the constituents of peat and cow dung, should so nearly coincide. Dr. Dana's estimate of the several parts of peat of average quality, and of cow dung, is as follows. The peat was fresh dug, in this case; before, it was dried at 300°.

	Peat.	Cow Dung.
Water,	85.	83.60
Salts,	1.	.95
Geine,	14.	15.45

Peat composts.—But notwithstanding this decayed vegetable matter is so rich in the organic elements of plants, experience proves that, applied in its natural state, it is almost valueless as a manure, compared with stable manures; and hence the reason it has been so little prized. Science has shown the cause of this result, and the means of obviating it; or, in other words, of unlocking the fertilizing powers of these vegetable deposits. To be able to give out ammonia, the peat or swamp muck must be fermented; and this may be effected by the direct addition of alkalies, or by making the peat into a compost with fresh manures. If alkalies are added, the quantity necessary to bring a ton of fresh peat into the same condition, so far as regards ammonia, as cow dung, would be "92 lbs. of potash, 61 lbs. of soda, or 16 to 20 bushels of common house ashes." But the farmer will usually find the best method of using peat, will be to combine the peat with manure, by mixing it with dung in his yards, or making it into compost. Many experiments have been made by some of the best farmers and gardeners of Massachusetts, in relation to the use of peat; and all unite in pronouncing it most valuable. Mr. Phinney, of Lexington, says, that "a cord of green dung converts twice its bulk of peat, into a manure of equal value to itself; that is, a cord of clear stable dung, composted with two of peat, forms a manure equal in value to three cords of green dung." Mr. Robbins, of Watertown, though owning a large stock, makes no use of their manures. These he sells; but keeps his farm in a high state of fertility, by mixing swamp muck or peat with spent ashes from his soap and candle factory. The proportions he uses are, one part of spent ashes to three of peat, dug up in the fall and mixed with the ashes in the spring. After shoveling over two or three times, it is spread and ploughed in. The effect is felt at once; and so far the manure has proved durable.

Use of peat or swamp muck.—According to Mr. Colman, in his Fourth Report, two thirds of the manure used on the extensive garden and farm of Mr. Cushing, near Boston, is made from meadow muck or peat. The compost, for top-dressing meadow and grass lands, is made by taking the muck from the pit in August or September, where it lies to the next year. The compost heap is then made on some convenient place, by

spreading a layer of muck eight inches thick; on the muck four inches of ashes; then another layer of muck, and so on for five layers, making a pile five feet high, in the form of a ridge. This lies through the winter, is opened and mixed in the spring, and the next fall is spread on the land. The compost for ploughed lands is made of two-thirds muck and one-third manure. Fresh manure, or that which has not fermented, is always used, and care is taken not to put in so much muck as to prevent the compost's heating. The fermentation of the manure decomposes the muck rapidly, and when this is done, the compost is fit for the land. Horse manure or unslacked lime, accelerates the fermentation—colder manure retards it. It is the opinion of Mr. Cushing and his gardener, that muck for mixing with cow dung, or for putting in hog styes, should be dug from the swamp six months before using, as the action of the atmosphere facilitates the change necessary. Muck, without this preparatory fermentation, they consider of little importance as a manure.

[TO BE CONTINUED.]

For the Farmers' Cabinet.

Trip to Rochester--New York Cattle Show.

To THE EDITOR,—Having made a rapid tour through a portion of New York and our own State, I have thrown together a few hasty notes, which are at your service.

In company with two of my brother farmers, we passed over the usual route to the city of New York by the night line, and of course could observe but little on our way. We, however, enjoyed a scene that no pen can describe, nor artist's pencil adorn. In one of the expansive curves of the beautiful Delaware, we had a view of the setting sun, that could not be surpassed by an Italian landscape in brilliancy and variety of colouring, softness of tints, and richness of shading, as displayed on the limpid stream,—the bold outline of trees and shrubbery, and the golden brilliancy of the Western sky.

New York city has many things to boast of, and her steamboats amongst the number, —the mightiest of which, is the "Empire," about one-sixteenth of a mile in length. In this majestic boat, we scudded rapidly over the surface of the noble Hudson, reaching Troy, 156 miles by night-fall, and a cost of only two dollars and a half, including two meals. Here we were transferred to cars, preparatory to a 300 miles ride, to their Western commercial, and manufacturing emporium, Rochester. The morning dawned on us soon after leaving Utica, and gave us for some 200 miles, an opportunity of seeing the country through which we rode. From Utica, west, the settlements are comparatively new, and the rail-road does not intersect the most improved portions, yet the population is tolerably dense, and increasing with rapidity. Nearly the whole line of this road across the State, is through a highly fertile soil, that has only begun to unfold its rich treasures to man.

When we reached Rochester, the great gathering had commenced. The farmers with their fine animals and rich productions, were pouring into the Fair, from every point of the compass, and not less than 20,000 people visited the show; and a *show* it really was, for a country, which thirty years ago, was a wilderness—the home of the Indian. The man was present, who sowed the first bushel of wheat in the county that has made one of the largest, and best agricultural displays yet witnessed by American farmers! There was a large collection of Durham cattle, of pure, and three-quarter blood—the cross, in most cases, being with the Devon, and without any apparent deterioration, while it increases the fineness of the animal. The quality of the Durhams, though not quite equal to that of our older settlements, was by no means discreditable.

There was a goodly number of the Red Devons, native and imported blood, which showed to advantage, and are in many respects, a valuable race of animals; but the Society has done them injustice, by bringing the Short-horns into comparison with them. The qualities and character of the two breeds, are quite distinct and different. There was a good collection of fat cattle—large and handsome bullocks, and also a great many yoke of beautiful oxen. In a word, the horned cattle were numerous, and showed well, the average, we think, being fully equal to the Albany display, last year. The sheep were of fine quality, but not so many of them on the ground as we had anticipated. Of the swinish family, the collection was not large, but the company remarkably select. In fact, the *light* they now shed on man, is *reflected back* on the corn-loving race, to their great edification and improvement.

This district being celebrated for horses, we had anticipated a fine display, and were not disappointed. Many of them were noble animals, but chiefly of the road and field horse, and not the high blooded racer. They were such as the farmer requires, whether for service or pleasure; but an occasional cross with the full blooded horse, we would suggest, as requisite to prevent deteriora-

tion. The display of implements, and of produce, was highly creditable for so new a country, but not so numerous, or so various, as at Albany.

Having given a sketch of the animals, &c., comprising the show, it remains to say something of the people and their doings; but as the news-papers have been showing them off, on all hands, it must suffice to remark, that the energy and enthusiasm which distinguish the New Yorkers, were not wanting.

After fully enjoying this rich display of agricultural wealth, as well as the generous hospitality of the New York farmers, we wended our way homeward; and, to see something of our native State, left the rail-road at Geneva, where we took steamboat and sailed up Seneca lake, whose beautiful and gently sloping borders, are fertile and highly cultivated. A stage ride from the head of the lake, through Elmira, soon brought us to the Pennsylvania line; and pursuing the course of the valley to Ralston, the rail-road helped us on to Williamsport. The route from Williamsport to Western New York, is remarkably straight and direct. A continuous rail-road to Seneca lake, would doubtless, command a great amount of trade and travel. We were particularly struck with the rapid increase of population, throughout this line of road. Nearly one-third of the houses have been built within two or three years.

A break in the canal compelled us to take stage to Northumberland, whence the canal and rail-road served to convey us home. There is a great deal of business doing on the Pennsylvania works, and the receipts this year must be large. In New York, we travelled over a rich and productive land, with a vigorous population, where comfort and neatness abound. Their dwellings are handsome, and mostly adorned with gardens, shrubbery, and shade trees; all look happy and prosperous. But for superior farming, fine fields, good and clean fences, a high state of cultivation, noble barns and abundant granaries, our enterprising neighbours cannot approach the Pennsylvania farmer. No where in the Union, is the cultivation of the soil so perfect, as in the rich plains and valleys of old Pennsylvania. In the ride from Harrisburg to Philadelphia, we saw abundant evidence of the highly advanced state of our agriculture. R.

Philadelphia, October 2nd, 1843.

Early rising is indispensable to the farmer. If he rises late, he must run after his business all day, and will scarcely overtake it by night.

From the Maine Farmer.

How to be Rich.

The secret is not in earning, but in saving—almost any man can earn money, but few can keep it. A small sum is disregarded; yet a large one is only several small ones united; unless little ones are laid together, how can there ever be a great one?

Suppose a person save a cent a day—at the end of one year, he has three dollars and sixty-five cents—at the end of 20 years, one hundred dollars, including interest. How easy it is for a man to save a cent a day; how many can save ten cents a day—or thirty-six dollars and fifty cents a year—or about one thousand dollars in 20 years, including interest?

He who spends seven cents a day, upon some idle fancy—for instance, in drink, cigars, fruit, &c., should at the same time reflect that he thus throws away the interest of a dollar a year. Are there not often occasions in the course of a day, when a person spends three cents, two cents, or one cent, which he might avoid, without feeling the worse for it? Then goes his ten cents a day—his one thousand dollars in 20 years—the very interest of which would afford him and his heirs, a clear profit of seventy dollars a year. Many grow rich by saving, with but very little faculty for earning; some old men who have always lived well, are very rich from mere saving, who did not earn so much daily, as their poor neighbours.

Edwin Payne.

West Turin, April, 1843.

A Good Hint.—The celebrated Dr. Abernethy once said: "I tell you honestly, what I think is the whole cause of the complicated maladies of the human frame; it is their gormandizing and stuffing, and stimulating the digestive organs to excess, thereby creating irritation. The state of their mind is another grand cause—the fidgeting and discontenting themselves about that which cannot be helped. Passions of all kinds—malignant passions and worldly cares pressing on the mind, disturb the central action, and do a great deal of harm."

Dry wood will produce on a moderate estimate, twice as much heat as the same amount of green wood, and saves much trouble in kindling fires on cold mornings. To prevent its burning away too rapidly, the sticks should be large. To suppose that green wood will actually cause more heat in burning, than dry, is as absurd as to suppose a vessel of hot water will freeze sooner than a cold one.—*Cultivator.*

Agricultural Fair.

The Philadelphia Agricultural Society held its Annual Exhibition at the Lamb Tavern, on the 4th and 5th insts., and the Ploughing Match on the 6th. The ample grounds in the vicinity of the Hotel, were conveniently adapted to the purpose, and were so well filled with stock, implements, and people, as to make the scene an exceedingly animated and interesting one, and showed conclusively, the spirit and enterprise which are operating not only upon the Society itself, but upon our farmers, both of this State and the adjacent ones, many of whom were on the ground. The display of cattle of improved breeds, was, we thought, more numerous than last year, and included some as fine animals as are in the country. There were not a great many horses on the ground: there were however, some fine specimens of this noble animal. Of sheep and hogs, there were very few. The agricultural implements spread out for examination, did great credit to their makers, and could hardly help giving a broad hint to the farmer, that if his work was not well done, the fault was not in the tools that were offered him. The weather was charming: our autumns are proverbially delightful; the last two days were perfect specimens.

A stage was erected in the field for the accommodation of the orator of the day—Peter A. Browne, and the officers of the Society. About noon, on the 5th, James Gowen introduced him to the people, and the Address was listened to with deep attention and pleasure. The following outline of it, we copy from the United States Gazette of the 6th inst.—Ed.

The first occupation of civilized man, he said, was Agriculture. In his barbarous state he roamed about the earth hunting the wild beasts of the forest—snaring fish—or plucking the berries and roots which grew spontaneously. But when the light of civilization dawned upon him, he took to the earth, stirred the soil, scattered a few seeds, and reaped a scanty but permanent reward. It was not only the earliest, but the most healthful employment of civilized man, and by that moderate labour for which he was by nature destined, he gains an appetite for his simple but wholesome food, and insures a sound and invigorating sleep when the toils of the day are over.

Agriculture is the most useful employment that any one can pursue—without it there could be no commerce, for if we had nothing to offer in exchange with foreign nations, they would soon cease to furnish us with their productions. Besides what is consumed at home, at least three-fourths of all the exports are furnished by Agriculture. Without it there could be but few manufactures, for it is the farmer who raises the cotton, flax and hemp, indispensable to the manufacturer's pursuits:—and the miner, how could he continue to delve into the earth, if the provident farmer, was not in the meantime employed in providing his daily food! The labour required at the hands of those who till the earth is not incessant. Nature is bountiful to those who are moderately industrious, and after every rural pursuit has been assiduously attended to, ample time is left to improve the mind, to cultivate the morals, and to attend to those religious duties that are indispensable to a finite and responsible being, under every condition of life, and therefore the cultivation of the earth would, appear to be, a most desirable employment—combining health, usefulness, morality and prosperity in an eminent degree.

Some interesting statements followed concerning the early efforts of the Society to subvert the determined prejudices against "Book Farming," or scientific improvements in agriculture; then entertained upon the principle, that those who did not follow the plough could not possibly advise the tillers of the soil—an opposition carried so far, that Washington failed in his endeavours to prevail upon the National Legislature to establish a "National Professorship of Agriculture," and the wise Madison laboured in vain to cause a similar professorship to be engrafted upon the plan of the University of Virginia.

The orator then proceeded, after paying a tribute to the value to the husbandman, of the researches of Sir Humphrey Davy, Liebig, Silliman, Vanuxem, and Rogers, to point to the sources of knowledge, whence the farmer, desirous of understanding his profession and acquiring the ability to use and produce the gifts of nature to the best advatage, should turn for instruction.

No one, continued he, need be appalled at the amount of labour in learning—there was no need to be profound in all—it was only necessary not to be ignorant of those points in each department of science intimately connected with his own pursuits. The means of learning have been multiplied, and the long winter evenings would afford ample time for the acquirement of the necessary knowledge. To their means of enjoyment, also, had been added agricultural societies, by which industry had been stimulated, emulation excited, and an incalculable amount of good done. The cause is advancing, and the friends of the art do not despair of the establishment of a national professorship. In some particular branches of agriculture, much had been done in the way of their advancement. In 1842, Ohio paid bounties on silk to the amount of $6,500, Pennsylvania $4,000, and agricultural societies had induced the employment of the pens of men of eminence, to investigate the causes of smut, rust, and the Hessian fly, with lauda-

ble results: and the recent efforts of government, through its consuls and foreign agents, to collect seeds from foreign countries, could not be too much applauded.

The American Farmer is the actual tenant of the soil—his house is his sanctuary—he sits in the Legislature to enact laws, and in the jury box to administer justice: aware of the benefits of Christianity, he supports religion from motives of pure piety, and worships the Lord of Hosts according to the dictates of his conscience.

He is bountifully supplied with the productions of nature.

The quantity of Bread stuffs raised in the U. States in 1842, reached to 700,000,000 bushels, which is sufficient to allow 39 bushels to every man, woman and child in the country; and is it wonderful then, that the yeomen are considered the bone and muscle of the country?

The orator then briefly commented on the fact of so many parents and guardians pressing their youth into professions already crowded, where few excel and many utterly fail, instead of selecting the profession of Agriculture, which in this country, will always be respected. An American farmer, Washington, led the Revolutionary armies to victory, and insured the blessings of liberty and independence! And, in our late struggle with England, another American farmer, Major General Jacob Brown, was actively engaged in the contest. Congress and the State Legislatures have always been filled with planters and farmers, who considered it no reproach that they "lived by the sweat of the brow."

The orator then proceeded to make a few suggestions for practical farming, concerning a judicious rotation of crops adapted to our climate, especially ROOTS; a greater attention to soiling, irrigation, proper selection of seeds; the preservation and economical use of manure; the introduction more generally of labour saving machinery; gardening and raising fruit, adding words of praise for what had been done in ensuring the best breeds of cattle.

Pennsylvania contains nearly thirty millions of acres. According to the census of 1840, she had a population of one million seven hundred and odd thousands, which is nineteen acres and a fraction for each inhabitant. In 1842, she raised, of grains of all kinds, upwards of sixty millions of bushels; of hay, upwards of two millions and a quarter of tons; of flax and hemp, nearly three thousand three hundred tons; of tobacco, four hundred and eighty thousand pounds; of silk, upwards of twenty-one thousand pounds; of sugar, nearly three millions and a half of pounds; and of wines, nearly eighteen thousand gallons.

In the Wheat crop, Pennsylvania ranked the third state in the Union; Ohio raised twenty-five millions and a quarter of bushels; and New York upwards of eleven millions of bushels, while we raised ten millions eight hundred thousand bushels.

In the Indian Corn crop, (the great staple of the United States) Pennsylvania stands only the twelfth state in the scale of production. We raised thirteen and a half millions of bushels, whereas Tennessee produced nearly fifty six millions of bushels; and Kentucky raised nearly fifty millions of bushels.

But Tennessee or Kentucky that year did not produce half the quantity of wheat that was raised by Pennsylvania. The entire wheat crop of the United States in 1842, was rising one hundred and two millions and a quarter of bushels, of which Pennsylvania raised more than a tenth. So that, while the Pennsylvania farmer can find nothing in the national statistics of which he ought to be ashamed, he perceives much in the industry of other States to excite his ambition.

With a congratulation to his auditors on our general prosperity, and an earnest exhortation to preserve the integrity of the Government—to maintain peace without, and industry, sobriety, economy and independence within; adding a beautiful picture of the future destiny of our country, he brought his address to a close.

At the close of the Address, J. Gowen again came forward, and on behalf of the respective committees, announced the following

Premiums.

For the best thorough-bred stud-horse, to Dennis Kelly's Mingo, Jr., first premium,	$12
For the next best do., to Dr. George McClellan's Bloody Nathan,	6
For the best stud-horse adapted to the road, to Charles Lloyd's Ploughboy, first premium,	10
For the next best do., to John F. Parker's Busiris, Jr.	5
For the best thorough-bred brood mare, to Dennis Kelly's Smilax, first premium,	10
For the next best do., to Dennis Kelly's Lady Slipper,	5
For the best mare adapted to the field and the road, Hugh Rogers' Fanny, second premium,	5
For the best horse colt, between two and four years old, to Dr. G. McClellan's John M. Clayton,	6

For the next best ditto, Wm. C. Cardwell's Tippecanoe, $4

For the best filly or mare colt, between two and four years old, to Edward B. Green's Grand Dutchess, first premium, 8

For the next best ditto, to Manuel Eyre, Jr.'s Fanny, 4

CATTLE OVER TWO YEARS OLD.

For the best Durham bull, over three years old, to Captain George Maxwell, of Delaware, for St. Patrick, of imported stock, $12

For the next best ditto, to William Thomas, for the Duke of Wellington, 6

For the best Durham bull, between two and three years old, to Isaac Newton, for Rodney, 10

For the next best ditto, to Col. K. Smith, for Diego, 5

For the best bull of Devon blood, to B. Yocum, for Merion, Jr., 8

For the next best do., to Thomas Smith, of Delaware county, for Octorara, 4

For the best Ayrshire bull, to J. N. Dixon, for Wallace, three years old, 8

For the best Alderney bull, to R. T. Potts, for Orange Boy, two years old, 8

For the best bull of imported breed, to John Hill, for Prince Albert, 8

For the best Durham cow over 4 years old, to James Gowen, for Cleopatra, 10

For the next best do., to Dennis Kelly, for Cinderella, 5

For the best Durham cow, between two and four years old, to Isaac W. Roberts, for Mayflower, bred by Captain Maxwell, of Delaware, 10

For the next best do., to Owen Jones, for Jessie, also bred by Captain Maxwell, 5

For the best Durham heifer, between 2 and 3 years old, to James Gowen, for Darby Kate, 6

For the next best do., to Manuel Eyre, Jr., for Jeanie Deans, 3

For the best heifer of other improved breeds, between two and three years old, to Samuel Martin, for Lady, 4

For the best cow of Devon blood, to Josiah Barnet, for Cherry, 8

For the second best do., to R. T. Potts, for Julia, 4

For the best Alderney cow, to R. T. Potts, for Orange Maid, 8

For the best cow of mixed blood, to Isaac W. Roberts, for Victoria, by Frolic, 6

For the next best ditto, to S. Williams, for Edith, of Durham and Ayrshire cross, 3

For the best ox or steer, to C. Wyman, for his red steer, five years old, $10

To Charles Jones, for a fine pair of Devon twin steers, two years old, a complimentary premium of 3

For the best cow of any breed, which may have received the highest premium of this or any other Agricultural Society, to Isaac W. Roberts, for Rosanna, of Durham breed, the special premium of 20

The Committee also award a complimentary premium of $5 to Dennis Kelly, for the excellent condition in which his fine cow, Western Lady, 16 years old, appears. The Committee notice that the display of improved cattle was much finer this year, than at any previous exhibition, and that there were on the ground, two splendid Durham cows, with their progeny, in all eleven head, the property of Mr. Whitticar, of England, which were not offered for premiums, but attracted much attention by their admirable points.

CATTLE UNDER TWO YEARS OLD.

For the best Durham bull, between one and two years old, to John Hunter, for Bruce, $8

For the next best ditto, to Isaac W. Roberts, for Washington, 4

For the best bull of other improved breed, to Joseph Brady, for Geordie, 6

For the best Durham bull-calf, between four months and one year old, to Isaac W. Roberts, for Hector, 6

For the next best ditto, to Dennis Kelly, for Diego, 3

For the best Durham heifer, between one and two years old, to Dennis Kelly, for Sally Miller, by Leander, 6

For the next best ditto, to James Gowen, for Miss Model, 3

For the best heifer of other improved breed, to Benjamin B. Yocum, for Red Rose, a Devon, 4

For the next best do., to the same gentleman, for Blossom, of the same breed, 2

For the best bull-calf, of improved breed, between four months and one year old, to Isaac Newton, for his bull Tonkin, 4

For the next best ditto, to Col. Kenderton Smith, for his white bull, 2

For the best Durham heifer, between four months and one year old, to Samuel Martin, for Lancaster Beauty, 6

For the next best, to Dennis Kelly, for Primrose, 3

For the best heifer-calf, of improved breed, to Samuel Cooper, for Ellen, by Traveller, 4

For the next best, to Aaron Clement, for Young Rowan, by Leander, $2
For the best steer between one and two years old, to I. W. Roberts, for Bonaparte, 4
For the next best, to Isaac Newton, for a Devon steer, 2

SHEEP AND SWINE.

To Alexander Johnson, of Lower Merion, for his Southdown buck, the first premium of 4
To T. M. Smith, of Tinicum, Delaware county, for the next best ditto, 2
For the best Southdown buck lamb, to John Johnson, 2
For the four best Southdown ewes, to the same gentleman, 4
For the four next best do., to the same gentleman, 2
For the four best Southdown lambs, to the same gentleman, 2
For the four next best ditto, to the same gentleman, 1
For the best Leicester buck, to Aaron Johnson, 4
For the four best Leicester lambs, to the same gentleman, 2
For the four best Bakewell ewes, to John Johnson, 4
For three fine Southdown ewes, to Lewis Willard, a complimentary premium of 2
For the best Berkshire boar, to Elijah Thompson, 4
For the best sow, Berkshire and Chester county cross, to Lewis Willard, 4
For the next best, to the same, 2

AGRICULTURAL IMPLEMENTS, PRODUCE, &c.

For the best display of Agricultural implements, to Landreth & Munns, the first premium of $8
For the next best, to Edwin Chandler, 4
For the best Corn-sheller, to Landreth & Munns, for a patent machine of Mr. Manning, of Trenton, N. J., 4
For the next best, to Edwin Chandler, 2
For the best Straw-cutter, to Jesse Arney, of Wilmington, Delaware, 4
For the next best, to Edwin Chandler, 2

The Committee award a complimentary premium of $2 to John Bamborough, of Mount Joy, for an improved Grain Fan, which they recommend.

They also award a similar premium to John W. Henry, for his portable Steaming Apparatus.

They likewise pass a complimentary notice upon a Threshing Machine, by Pearson & Gregg, of Wilmington, Del.

For the best wheat, (Mediterranean) to Edward French, of New Jersey, a premium of $3
For the next best, (white) to William Dilks, of Delaware county, 1
For the best Rye, to Ephraim Holbert, 2
For the best Oats, to Samuel S. Richie, of Germantown, 2
For the best display of agricultural products, to Samuel S. Richie, 4
For the next best, to Isaac Newton, 2
For a basket of fine white Ruta-baga turnips, to William Howell, a complimentary premium of 1

The seed for these premium turnips was obtained from Landreth & Munns. The Committee also notice some fine specimens of produce from the Olney Farm of Mr. Samuel C. Ford.

The following notice of the Ploughing Match, we copy from the United States Gazette.

The Ploughing match came off according to notice, before a large number of spectators, mostly agriculturists, who were much interested, and watched with eagerness the performances of the competitors. The number of ploughs entered for trial, were ten; comprising all the varieties which are already celebrated for excellence, and some hitherto unknown.

The field for the trial lay a short distance east of Thompson's Hotel, and the distance to be ploughed by each competitor,—about one-sixteenth of an acre for each—having been fixed by the judges, the lines were run by the ploughmen; marking by a light furrow, the distance to be ploughed; the order of arrangement being as follows:

No. 1. Plough—J. H. Pawling maker and owner, of Lower Merion, Montgomery county; drawn by two grey horses:—Thomas Haley, of Delaware county, ploughman.

No. 2. Plough—John Hunter, of Blockley, owner, Messrs. Shallcross & Franklin, makers; drawn by dark grey horses:—Andrew Haugh, ploughman.

No. 3. The Garrett Plough—Messrs. C. Garrett & Sons, owners and makers, of Upper Darby; drawn by brown horses:—Philip Garrett, of Upper Darby, ploughman.

No. 4. Plough—Mahlon Smith, maker and owner, of Plumstead township, Bucks co.; drawn by grey and chesnut horses:—Jonathan Smith, ploughman.

No. 5. J. S. Eastman's "Cleazy" Plough, of Baltimore; drawn by bay and grey horses:—Richard Clevenger, ploughman.

No. 6. The Prouty Plough, No. 5, owned by Mr. Howell; drawn by grey and black horses:—John Edinger, ploughman.

No. 7. The Iron Plough, imported from Ireland, and owned by Col. John Price Wetherill; drawn by beautiful bay horses:—Edward McCloskay, ploughman.

No. 8. Jos. Dickinson's Plough, of Chesnut Hill, made and owned by him; drawn by brown and grey horses:—Cadwalader Biddle, ploughman.

No. 9. J. B. Moore's Plough, of Wilmington, Del., made and owned by him; drawn by bay and brown horses:—John Smith, ploughman.

No. 10. The Prouty Plough, (No. 5½) entered by John Newlove, of Newcastle, Del.; drawn by black horses:—John Newlove, ploughman.

Having been arranged according to order, the signal to start was given about half past twelve o'clock, and the ploughs were set in motion—the ploughmen striving their utmost to furrow the earth in the most skilful manner. All the work was done in splendid style, and most of the furrows were as straight as an arrow, the earth being turned over evenly, and broken so as entirely to hide the grass—the land side of the furrow being cut as clear and smooth, as if channelled out carefully with a spade.

The trial lasted about thirty minutes, and after a trial of a Subsoil plough, the invention of Mr. Eastman, of Baltimore, and an improved plough, the invention of Commodore Barron, the committee, after deliberation, and an inspection and comparison of the work performed, announced the following premiums:

For the best plough, to Mahlon Smith, of Bucks county, for his plough, the first premium of	$10
For the second best do., to J. B. Moore, of Wilmington, Del., the second premium of	5
For his excellence and skill in ploughing, to Jonathan Smith, the first premium of	5
For excellence and skill in ploughing, next in merit, to Andrew Haugh, the second premium of	3

THE FARMERS' CABINET,
AND
AMERICAN HERD-BOOK.

PHILADELPHIA, TENTH MONTH, 1843.

Our agricultural friends of New Castle county, held their Annual Exhibition at Wilmington, Delaware, on the 13th and 14th of last month. It was a gala day for the farmers, and a bustling one for the town. The various articles exhibited did credit, as we are informed, both to the Society and the producers. The dinner was got up in fine style, and the Address from Dr. Darlington, was such as was anticipated by all who know the man. We heard it described as doing full credit to the subject, and giving proof of the good taste and judgment of those who decided upon the orator.

The manufactured articles gave evidence of very respectable proficiency, and were calculated to make the heart of "little Delaware" beat quick, and swell with an honest pride, when she glanced her eye over that rich display of the industry and handiwork of her children. Labour and skill constitute the true foundation of prosperity. The mills and the manufactures of Brandywine, have long been pointed to, as among the most effective in the Union; and if we do not make wrong calculations in respect to the spirit of improvement and emulation that is abroad through this State, the period is not far distant, when the citizen of Delaware shall point to his own broad and luxuriant pastures, with as much complacency, as does now, his neighbour of Lancaster or Chester.

Farmers had been invited to exhibit their working oxen in a long train; and in the morning of the 13th, seventy-five yoke, attached to a carriage, laden with the implements of husbandry, and the results of their use, were driven through the town, showing to the citizens an extent and strength of team, they had never seen before.

The Ploughing match was an exciting affair. The ground selected for the purpose, was on the farm of Chauncey P. Holcomb, Esq., two or three miles from Wilmington. Sixteen ploughs entered the lists. The lands, containing the eighth of an acre each, had been previously laid out and staked, and a couple of furrows thrown up as a beginning. Forty minutes time were allowed for completing the task, the competitors being urged to the greatest care in its performance: the ground to be well broken up and pulverized, and the furrow six inches in depth, to be carefully laid, so as effectually to bury the sod. "At the signal for starting, the teams dashed forward like greyhounds from the slip," says a writer in the Pennsylvania Inquirer, in whom we recognize an old acquaintance. C. P. Holcomb's four-ox team was the only one in attendance—the rest being all horses—and it performed the task in a workmanlike manner, in twenty-one and a half minutes! "outwalking every horse team on the ground, by perhaps a couple of minutes."

"The first premium—a premium plough—was awarded to John Newlove, who ploughed with C. P. Holcomb's Prouty plough.

"The second premium—a premium harrow—was awarded to John W. Andrews:—ploughman, Richard Fountain.

"The third premium—'Youatt on Cattle'—to James B. Moore:—Richard Carter, ploughman.

"The fourth premium—certificate of merit—to F. Sawdon:—ploughman, Thomas Sawdon."

It is quite amusing to observe what a fever the South Western Farmer and one of its correspondents have worked themselves into, in relation to a very interesting article on the Influence of Climate on the Fruitfulness of Plants, as published in the eleventh number of our last volume. It would seem as if they had not read and *moralized* upon some of the adventures of the Knight of La Mancha, to much profit.

We have understood that Joseph Cope, of Marshallton, Chester county, Pa., has *Southdown Bucks* for sale.

The Horticultural Society held its Annual Exhibition in this city, in the large hall of the Chinese Museum, on the 20th, 21st, and 22nd ult. The display was rich in every thing befitting such an occasion; and the arrangements were not only judicious, but showed throughout, much taste and ingenuity. A new fountain, we suppose, of cast-iron, had been procured for the occasion, at an expense of several hundred dollars, which, with its ceaseless and cheerful playing, gave variety, and added comfort to all, affording much amusement to the younkers. The attendance was, perhaps, about as usual. On the second evening, there was for an hour or two, a complete jam: once in the crowd, it was little worth while to think of getting out, or of the object that brought you there, if that object was flowers; you could only go with the crowd, and to the right or left, nothing could be seen but those near by you, all panting for a little air—looking, nevertheless, quite happy, and like yourselves, enjoying the very misery of the predicament. In the gallery, at the further end of the room, we were able to *twist* around, and cast an eye on the moving mass below: we think there must have been three thousand people in the room. About two thousand dollars, we have understood, were taken during the three days.

We shall not attempt to enter into detail, but merely to state, in as few words as may be, the general impression made by repeated visits.

The fruits and the vegetables, as was to be expected from the luxuriousness of the season, were fine as could be desired. They were of all descriptions too, proving, that while every kind was urged to perfection, the most fastidious had, in our markets, the widest range of choice. The rich clusters of the grape, and the luscious pears, were really very tempting to look upon; while the one seemed almost to be inviting you to crush them, the others were soliciting you to let them melt in your mouth. The display of flowers, and of shrubbery, was exceedingly interesting. The collection of Cacti—that most singular family of plants, that seem to grow pell mell, and just as the fancy takes them, did great credit to our gardeners. Rare exotics, from the gardens of the curious in these matters, claimed their full share of attention, and divided the interest with our native plants. A great deal of nice fancy work, that embodied itself in arches and towers, and monuments, and grottoes, enlivened the scene very much, and as we suspect, helped to confirm the young folks in the idea, that there was a vast deal of poetry in the world. Splendid honey, as white as the sheet we are writing on, made the owners proud of their bees: and when the numerous premiums were announced, all, for aught we know, were satisfied. New Jersey was well in the field, and did her full part in contributing to these rich evidences of man's great power of persuasion over his mother earth. But where were old Gloucester and Burlington, that they suffered *Salem* to bear away the palm in sweet potatoes!

"The American Poultry Book; being a practical Treatise on the management of Domestic Poultry, by Micajah R. Cock;—published in New York, by Harper & Brothers;" and for sale at Lindsay & Blackiston's, corner of Fourth and Chesnut streets, Philadelphia, and also at this office.

A good deal of plain matter-of-fact information is given in this little book, that will be found valuable to those who would pay some attention to their poultry, as a common matter of business. There is too little attention given to that part of the stock on a farm, and too little care to make it profitable. Your poultry, no more than your sheep, will thrive, if they are not seen to, and cared for, and managed with judgment and skill adapted to their habits and particular requirements. It is a filthy practice,—which our author does not sufficiently reprobate, to suffer fowls to roost in the stables among cattle. Although the lice peculiar to each, will not live and increase on the other, yet every farmer who has been so negligent as to try the experiment, has found that the hen-louse is exceedingly annoying to cattle.

We gather from our friend R., whose communication appears on page 94, and from the *Central New York Farmer*, that they had a high day at the late Rochester Cattle Show. It is said that 20,000 people were in attendance, and among them were Ex-President Van Buren, Ex-Governor Seward, Governor Bouck, and our late Secretary of State, Daniel Webster: all of whom are farmers, knowing full well, how to turn a furrow, and who, like ourselves, have hoed many a corn row in their day. A shilling is paid at the gate for admittance, and thus is replenished the very considerable drain their treasury is subjected to, in providing all the needfuls for the occasion. They exhibited abundance of fine stock, fruit, agricultural implements, &c., which no doubt, did credit to all concerned. The greatest lion in the field, however, appears to have been the farmer of Lindenwold. When he attempted to view the stock, the curiosity of the mass was so great, that it was at once directed towards him instead of the cattle, and the crowd became so pressing, that he was compelled to leave the yard, and retire to his rooms.

The good things of the table were well discussed by those who were so fortunate as to reach them, for the confusion that was abroad; and abundance of good speaking made the evening pass off with great animation. In this, all the distinguished individuals we have named above, participated, as did also James S. Wadsworth, the president of the Society, and our fellow-townsman, James Gowen, Esq.

The Prince George's County Agricultural Society, will hold its third Annual Fair, at Upper Marlborough, Md., on the 1st and 2nd of next month. Its list of premiums is liberal, embracing stock, agricultural productions and implements, household manufactures, and fruit. Among the various premiums offered, we observe that agricultural periodicals—The American Farmer—The Cultivator, and the Farmer's Cabinet, are conspicuous. For the best Essay on the system of farming, best adapted to the tobacco growing counties of Maryland, the Farmer's Encyclopedia is offered. We have more than once heretofore, suggested premiums of this character: they are particularly appropriate.

At this favourable season for planting new Orchards or filling up old ones,—or for procuring a supply of Ornamental Trees, &c. &c. we would call the attention of farmers and others to *Samuel Rhoads' advertisement*. A list of his prices is left at our Office.

We have commenced in this number, the publication of an Essay on the Preparation and Use of Manures, by Willis Gaylord, of Otisco, N. Y. We take it from the Transactions of the New York State Agricultural Society, of last year. The prize was awarded to it by that Society, at its annual meeting in the winter.—It has been our aim, by giving short articles, to throw as much variety as possible, into our pages. We hesitated a good while, whether to publish the Essay, on account of the space it would occupy. The conclusion however, we came to, was, that we could not, with propriety, withhold it from the readers of the Cabinet. There is a great deal of plain common-sense practical matter in this Essay, that comes home to every farmer, and which, although but little of it may be new, will revive many valuable hints. These, with the familiar matter-of-fact manner, in which we are reminded of duties to be performed in relation to procuring food for our land, render the article, in our estimation, one of sterling value: and we earnestly recommend it to every reader of the Cabinet who has land, and is sensible that it needs manure. To farm without manure, is like a man who would go into business without capital and without credit. Land will yield nothing to promises: but deal liberally with it, and it will prove itself an honest and safe debtor.

It is stated in one of our exchange papers, that the worm may be destroyed or driven from the peach tree, "by pouring water almost boiling hot, around the roots in the autumn, when the eggs are deposited, and also in the spring, when any that escaped the first boiling, will be hatched."—This reminds us of information on the subject, obtained from William Johns, of this city, who certainly manages his fine lot on Broad and Pine streets, with much judgment and success. Stepping into his garden, some two or three weeks since, we were struck with the dark green appearance of the foliage on his peach trees, as well as delighted with the superior fruit, under which they were bending. He stated that a year or two ago, several of his trees had put on quite an unhealthy appearance, and he commenced putting around their roots, from time to time, *strong hot soap-suds*. He has also, occasionally applied lime and ashes to the trees. They now appear perfectly healthy. Their fruit took one of the premiums at our late Horticultural exhibition.

With his grapes too, W. J., has been remarkably successful: their training shows much skill; and the heavy clusters on numerous varieties, tell very plainly, that mother earth is not regardless of good treatment. He showed the most beautiful specimen of grafting the vine by *approach*, that we have seen. A bud of a choice foreign variety—we forget the particular kind—was introduced to a native stock, say sixteen months ago, when the vine was in full vigor, and four splendid bunches were now hanging from the slender stem.

On walking over this small lot, of perhaps less than half an acre, and observing the luxuriance of produce, and abundant variety of almost every thing of the vegetable kind wanted in a family, the reflection several times occurred—what would our *agriculture* be, if it were *gardening* on a large scale? And why should it not be? Why should we not *aim* in our farming generally, at the greatest limit of the earth's productiveness? In what—as was lately asked by Gideon B. Smith, on a certain occasion—in what should farming and gardening differ, but in the extensiveness of their respective scales of operation?

The Baltimore County Agricultural Society will hold its second Annual Cattle Show, Agricultural Exhibition, Ploughing match, and Sale, at Govan's Town, four miles from Baltimore, on the 18th, 19th, and 20th of this month. The Society offers a liberal list of premiums for stock, implements of husbandry, agricultural products, domestic manufactures, fruit, &c., &c., as well as for farms, crops, and essays. For the premiums offered for essays, agricultural implements, and machinery, competition is open from abroad. All other premiums are limited to the city and county.

For the best cultivated farms, they offer silver goblets:—for the best crops of corn and wheat, sets of American Farmer, Farmer's Cabinet, and Cultivator. For the best Essay on the system of farming, best adapted to Baltimore county, including rotation of crops, and having reference to the productiveness, as well as progressive improvement of the farm,—a copy of Loudon's Encyclopedia. For the best Treatise on the proper and most profitable method of applying lime,—set of American Farmer. For the best Essay explaining the cause of the failure of the rye crop, with a remedy for the same,—set of Farmer's Cabinet. For the best Treatise on the proper management of an apple and peach orchard,—Loudon's Encyclopedia on Gardening. For the best Treatise on the most effectual mode of destroying the Carolina pink, and other noxious weeds,—four years subscription to American Farmer, or Farmer's Cabinet. For the best Treatise on the Hessian fly, with a preventive against the ravages of the same, to be tested by a committee,—$25 in agricultural works, &c. We are aware that these items of information cannot be made available from our paper, as the meeting takes place now in three or four days. We give them as a little evidence of the spirit and animation our Baltimore friends are bringing into their operations. If our memory is not in fault, it is less than a year since this Society was organized. They now come into the field full grown, and well aware of their strength. An Address will be delivered on the 19th, at 12 o'clock.

The United States Gazette, of the 15th ult., says, that between half-past twelve and six o'clock, on the afternoon of the day before, there arrived at our wharves, on the Delaware, seven thousand baskets of peaches; and that by nine o'clock in the evening, they were all disposed of.

☞ SHORT ADVERTISEMENTS, ☜

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. The money to be paid in advance.

We did not receive the Address of Peter A. Browne, at the Cattle Show on the 5th ult., until the abstract of it, which we give in this number, was in type, and it was too late to give it in full. It shall appear in our next number.

FRUIT AND ORNAMENTAL TREES, EVERGREENS, SHRUBBERY, &c.,

In great variety, for sale as heretofore, by the subscriber, at his Nursery, near Haddington, four miles west of Philadelphia. Orders sent by mail, or left at the office of the Farmer's Cabinet—where Catalogues may be obtained—will be attended to, and the trees well packed, when ordered to distant places. City gardeners supplied with trees suitable for the streets, at a liberal discount. SAMUEL RHOADS.

Tenth mo. 15th, 1843.

WHOLESALE & RETAIL SEED & IMPLEMENT WAREHOUSE.

Constantly for sale, Corn Shellers of every variety, for hand or horse power; Straw and Corn-stalk Cutters, of different patterns, from $5 to $30 each. Grain Fans, of various kinds, from $8 to $30 each;—Corn Crackers, Sausage Cutters, Sausage Stuffers, Apple Parers, Churns on a new plan, which are cheap and good;—Self-sharpening Premium Ploughs;—Subsoil Ploughs; Agricultural Furnaces; Cooking Stoves, &c., for sale low, by D. O. PROUTY,

No. 176, Market street, above Fifth, Philad.

Agricultural Implement Manufactory,

No. 196, Market street, two doors above Sixth street, and two doors below the Red Lion Hotel:

Where are manufactured and for sale, lower than can be purchased elsewhere, Horse Powers and Threshing Machines, Fanning Mills, Corn Shellers, Straw and Hay Cutters, Horse Rakes, Ploughs, Harrows, Cultivators, Seed Planters, Cheese Presses, Churns, Pumps, and every kind of farming implement generally in use. Also, Beach's Self-sharpening Plough and castings—and Wiley's two-pointed do. Every description of implement made to order, or repaired by experienced workmen, and warranted. Slater's Patent Corn Sheller and Grinder. EDWIN CHANDLER,

Agent for Agricultural Machines of every description.

The quantity of rain which fell during the Ninth month, (September,) 1843, was nearly five inches.

4.856 inches.

Penn. Hospital, 10th mo. 1st, 1843.

POUDRETTE.

The manufacture of this article having now got fairly under way in Philadelphia, we shall have it constantly on hand, and for sale at the office of the Farmer's Cabinet; price one dollar and fifty cents per barrel, containing four bushels; or seven barrels for ten dollars—or thirty cents a bushel, at the manufactory. Orders from a distance, enclosing the cash, with cost of porterage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. Farmers to the South, and in the interior, both of this State and New Jersey, are invited to try the article this fall on their wheat; and in the spring, on their corn, vegetables, &c. The concern is under the care of D. K. Minor, whose establishment has been for several years in operation in New York, where the demand is continually increasing.

We have learned from several of our friends, that the potato crop in some parts of several counties of this State, as well as in parts of Delaware and Maryland, is very much a failure. They have not only rotted in the ground, but where they have been dug, and were apparently sound, they have very soon decayed—become very offensive, and entirely worthless for man or beast.

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Terms.—One dollar per annum, or five dollars for seven copies—*payable in advance.*

All subscriptions must commence at the *beginning* of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

For five dollars paid in advance, a *complete set* of the work will be furnished in numbers, including the eighth volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly *half-bound and lettered.* Copies returned to the office of publication, will also be bound upon the same terms.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage: that is, one cent on each number within the state, or within one hundred miles of the place of publication out of the state,—and one cent and a half to any other part of the United States—and Post Masters are at liberty to receive subscriptions, and forward them to the Publisher under their frank—thus affording an opportunity to all who wish it, to order the work, and pay for it without expense of postage.

Joseph Rakestraw, Printer.

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